

FIG.1

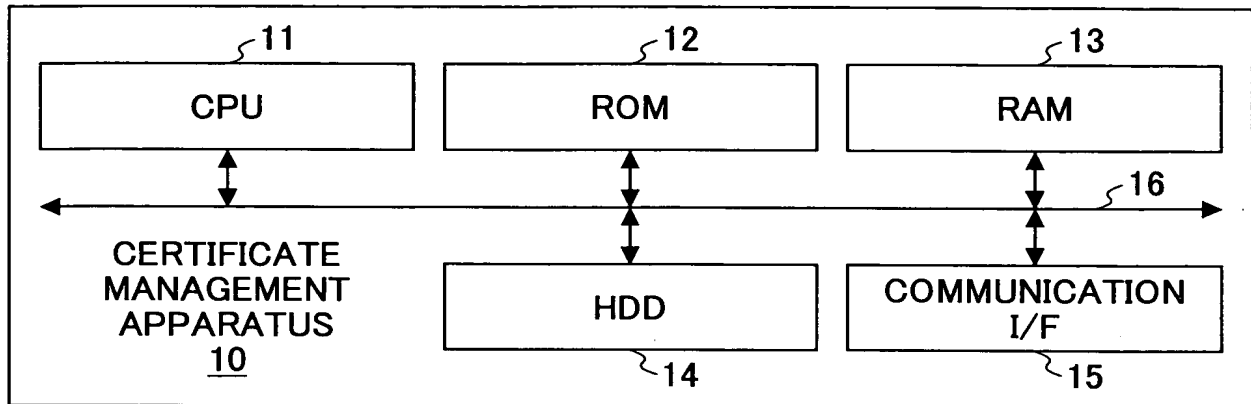


FIG.2

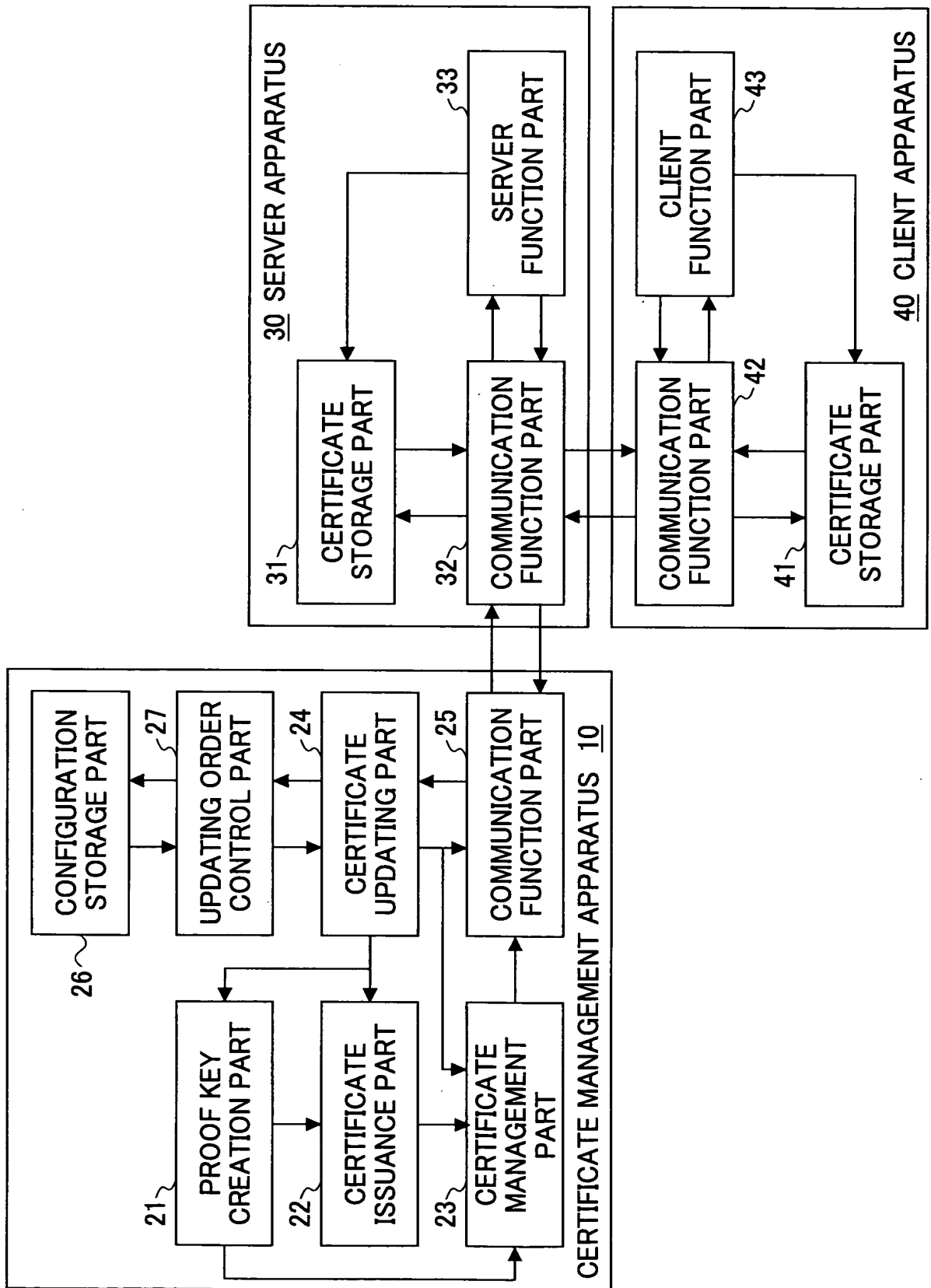


FIG.3A

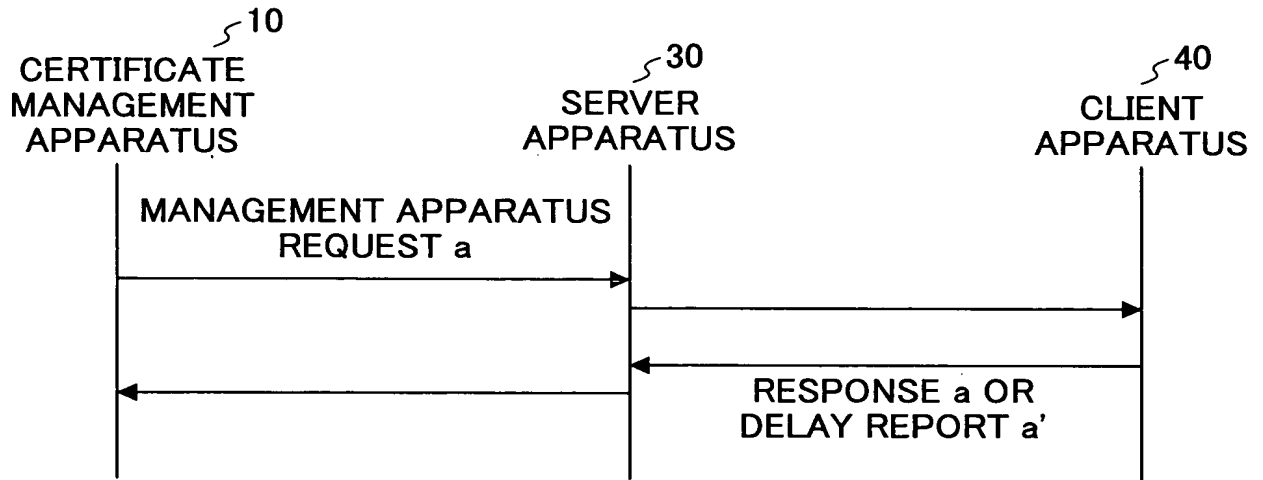


FIG.3B

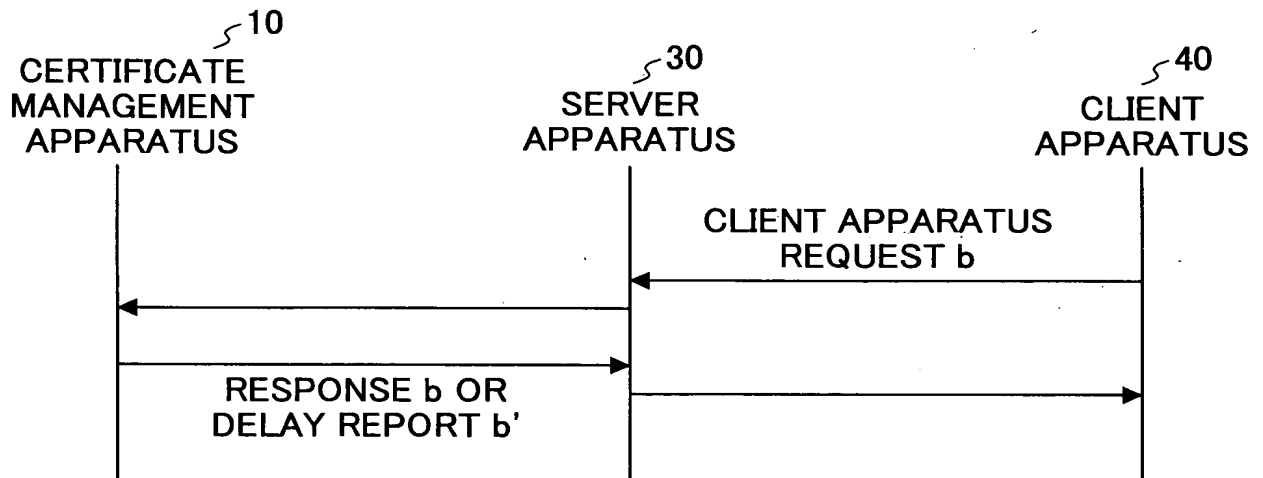


FIG.4

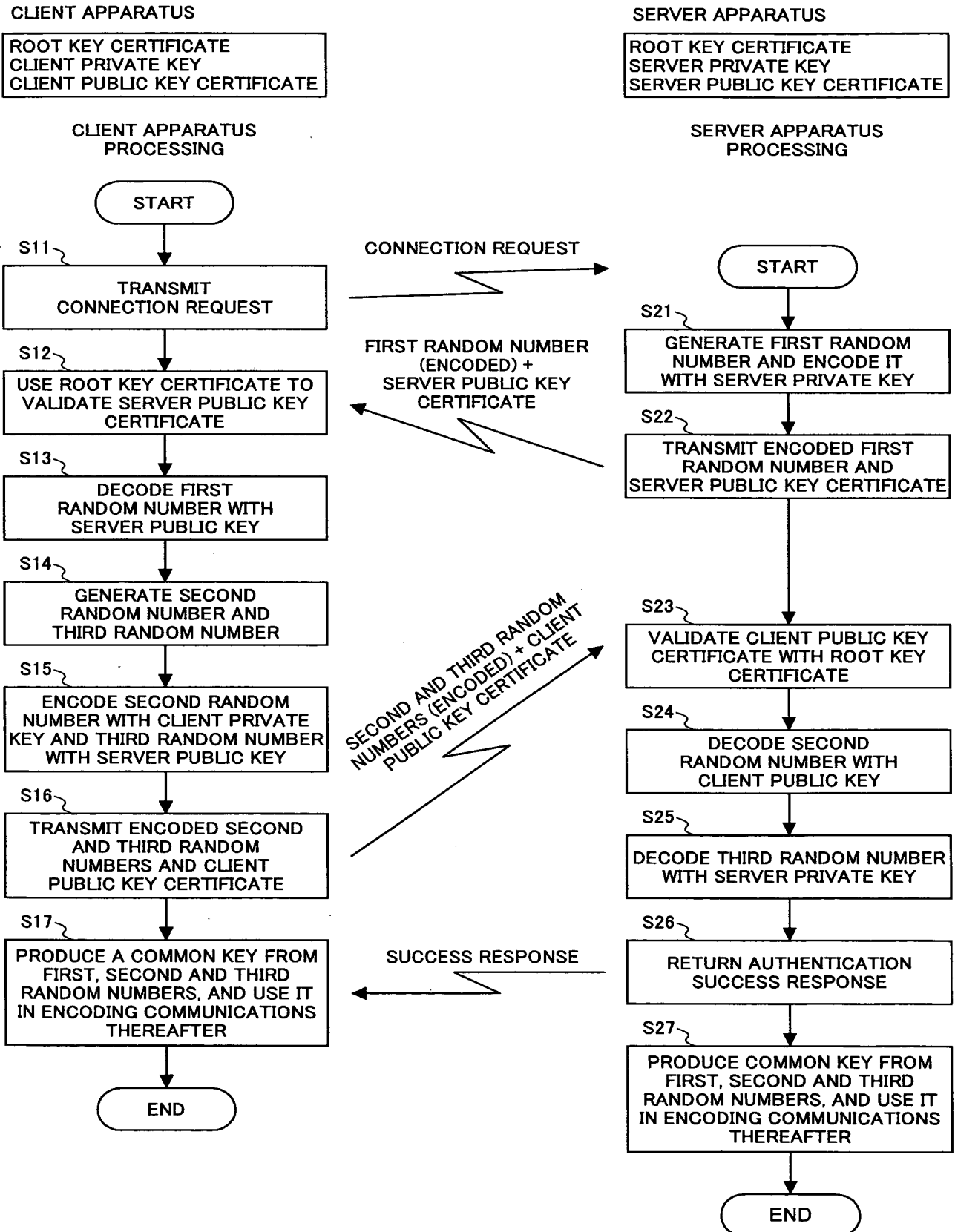


FIG.5

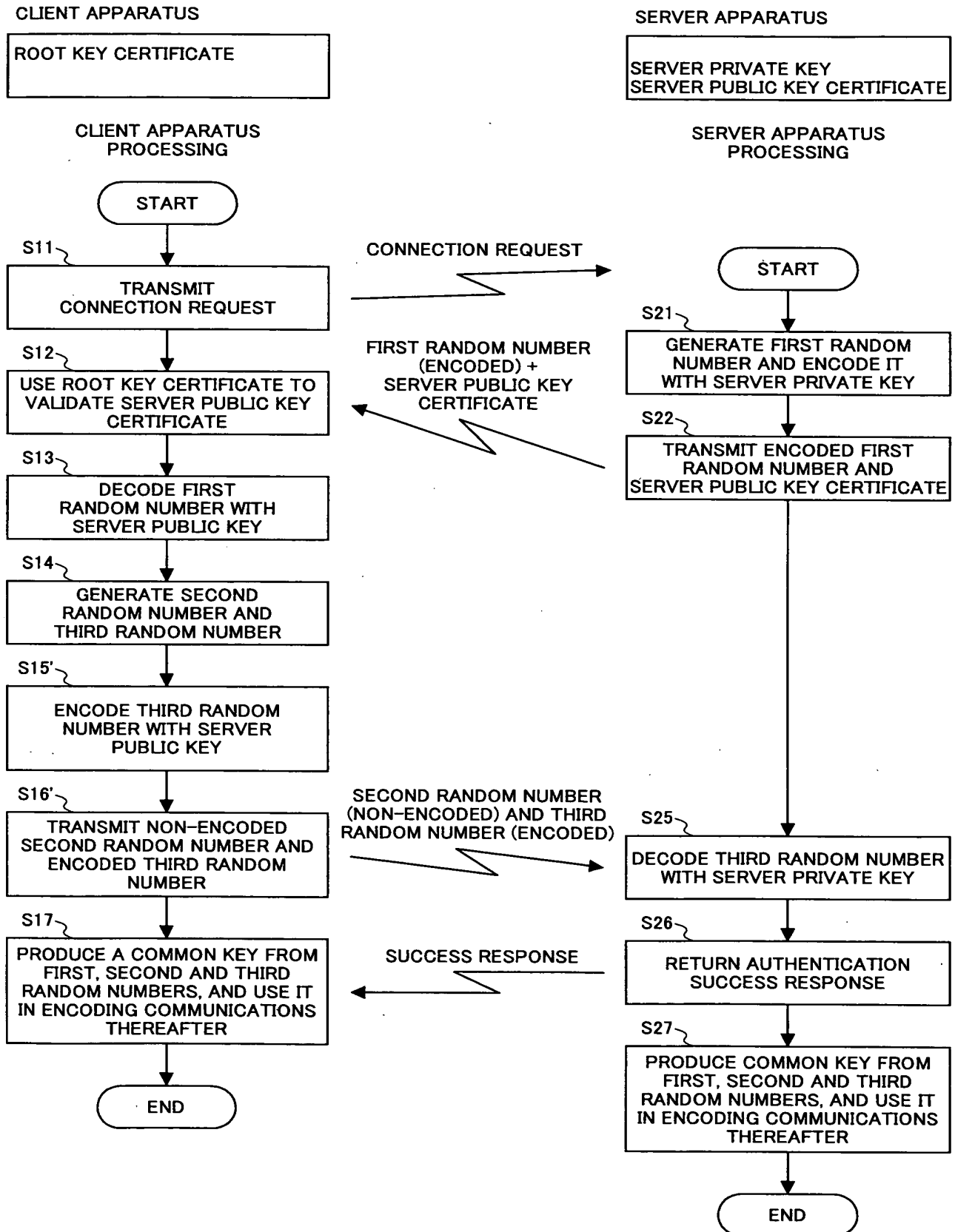


FIG.6

PROCESSING S

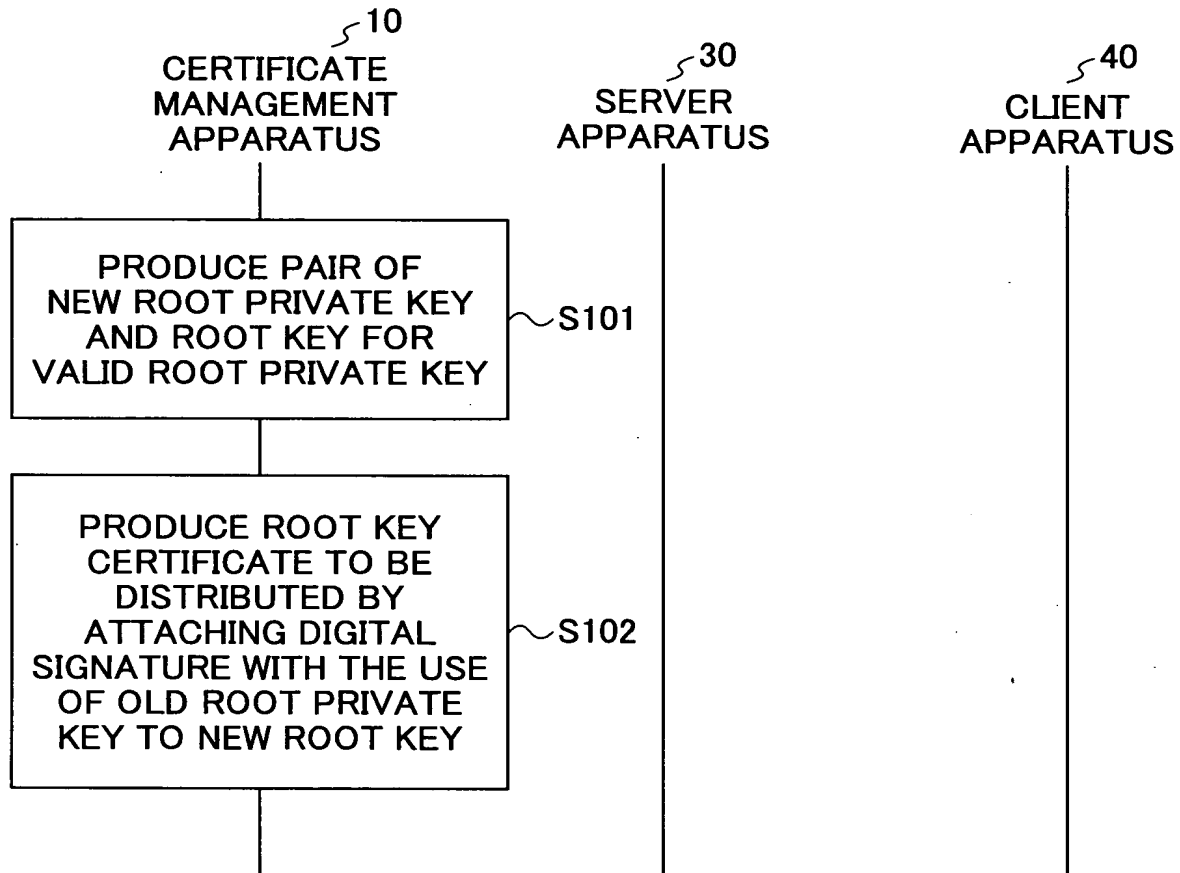


FIG.7

PROCESSING 1

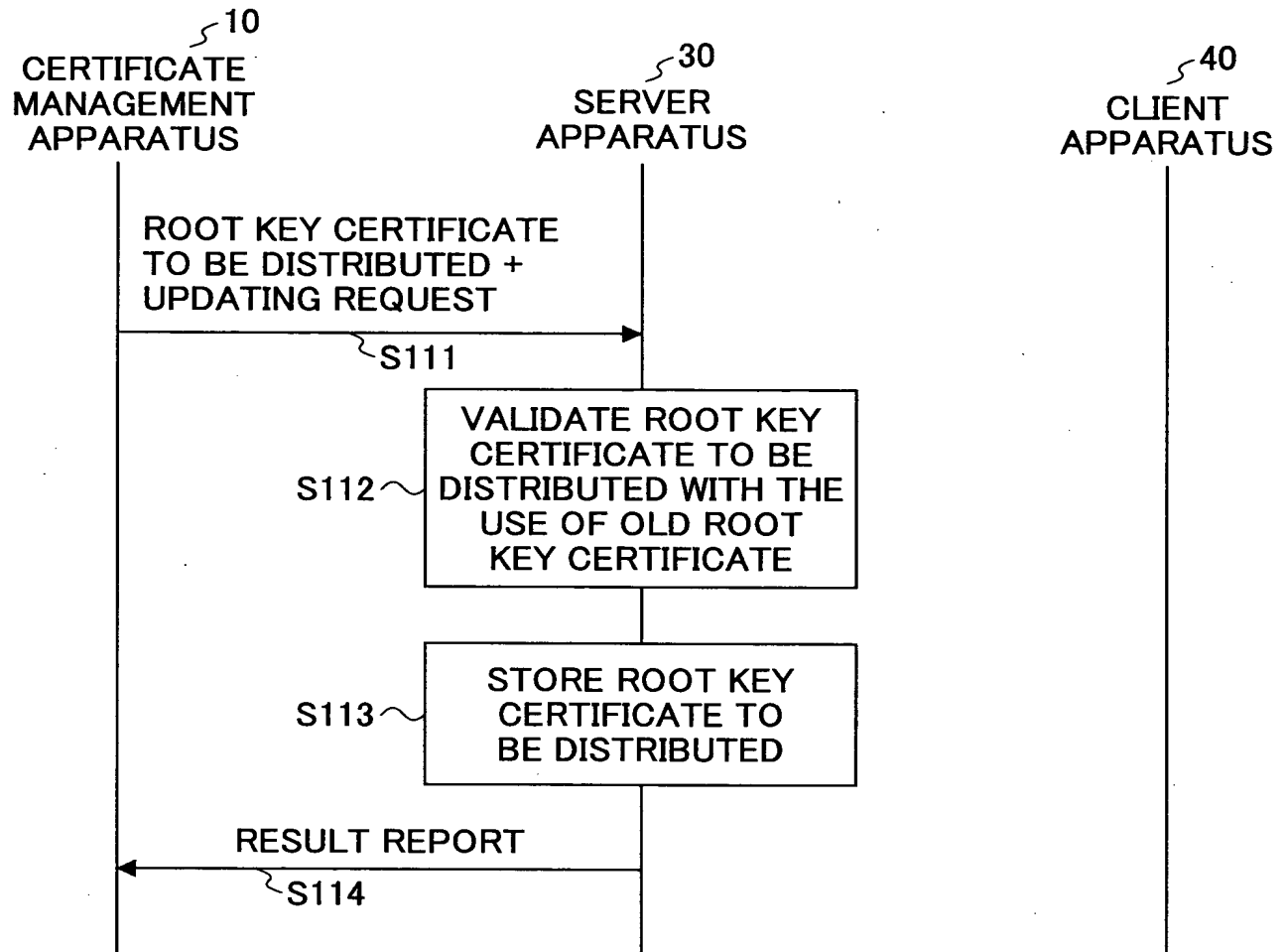


FIG.8

PROCESSING 2

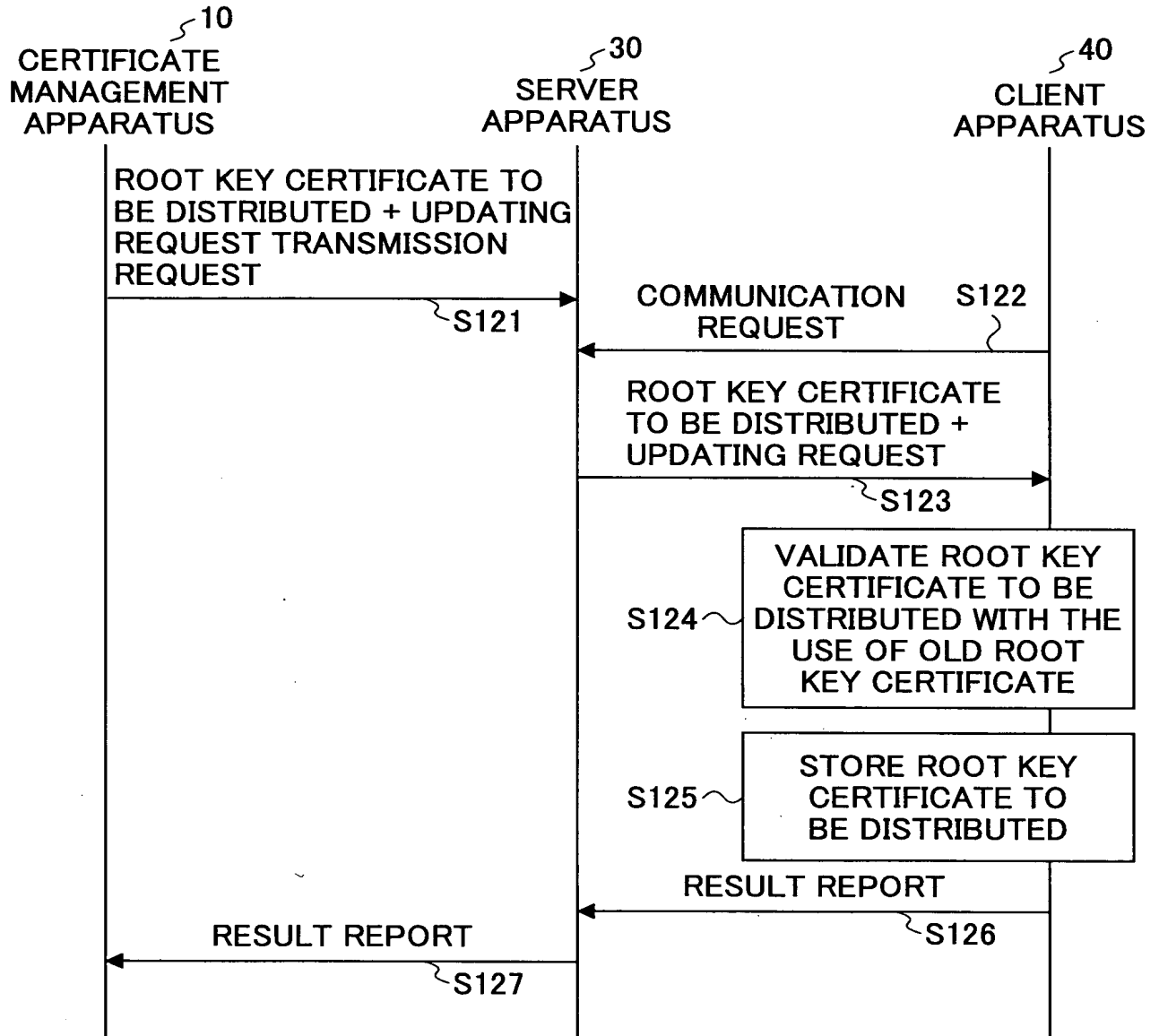


FIG.9

PROCESSING 3

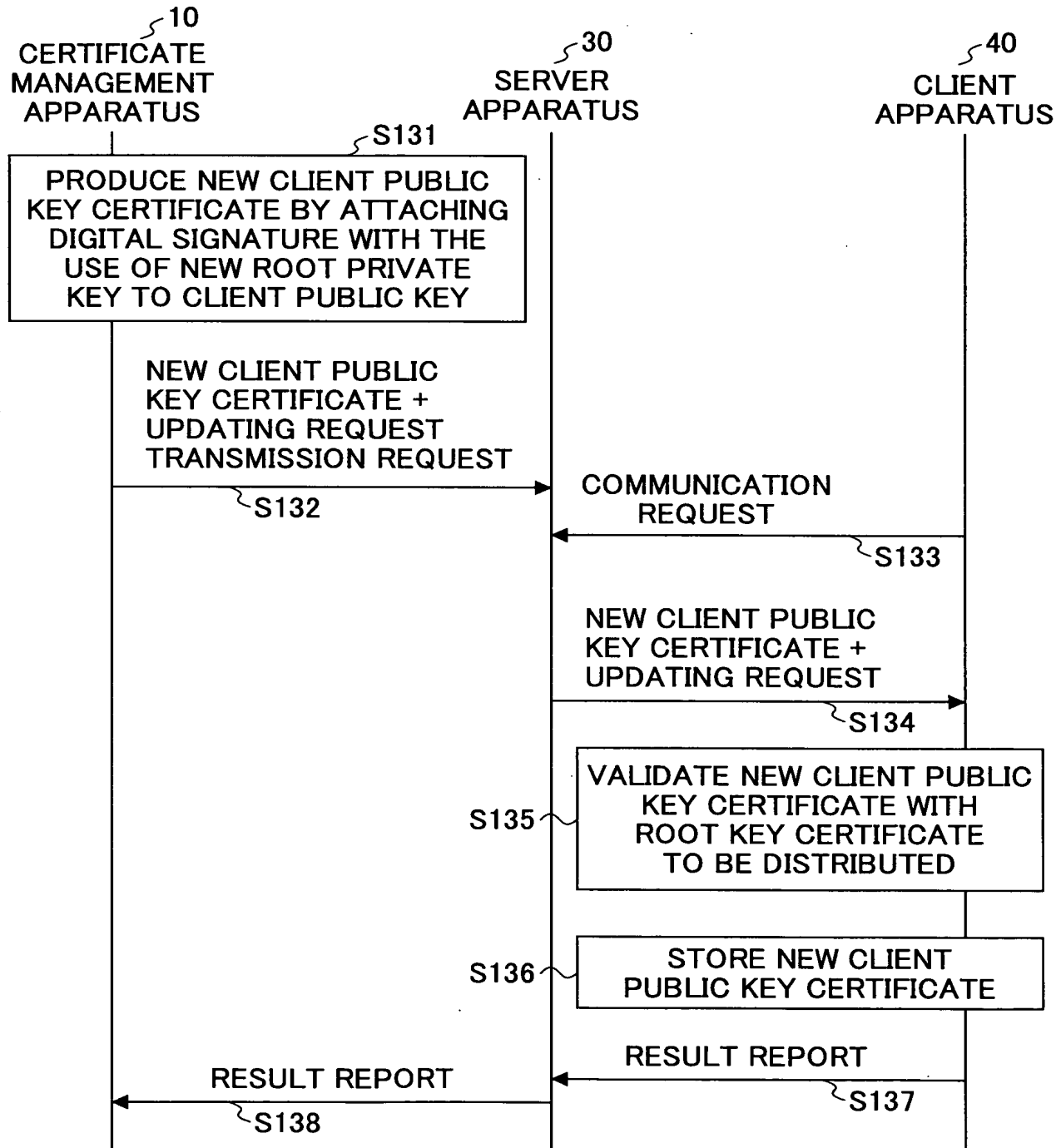


FIG.10

PROCESSING 4

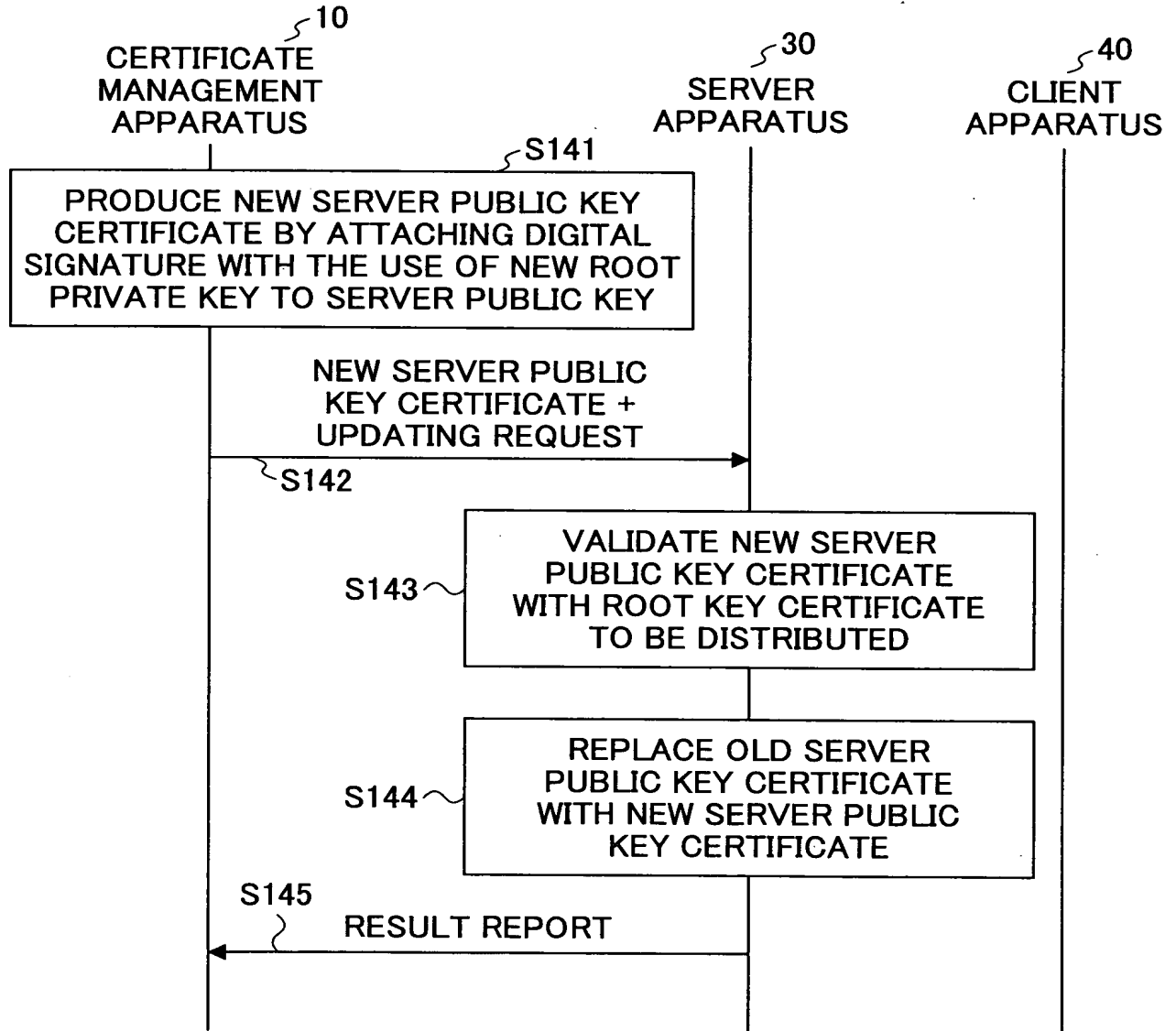


FIG.11

PROCESSING 5

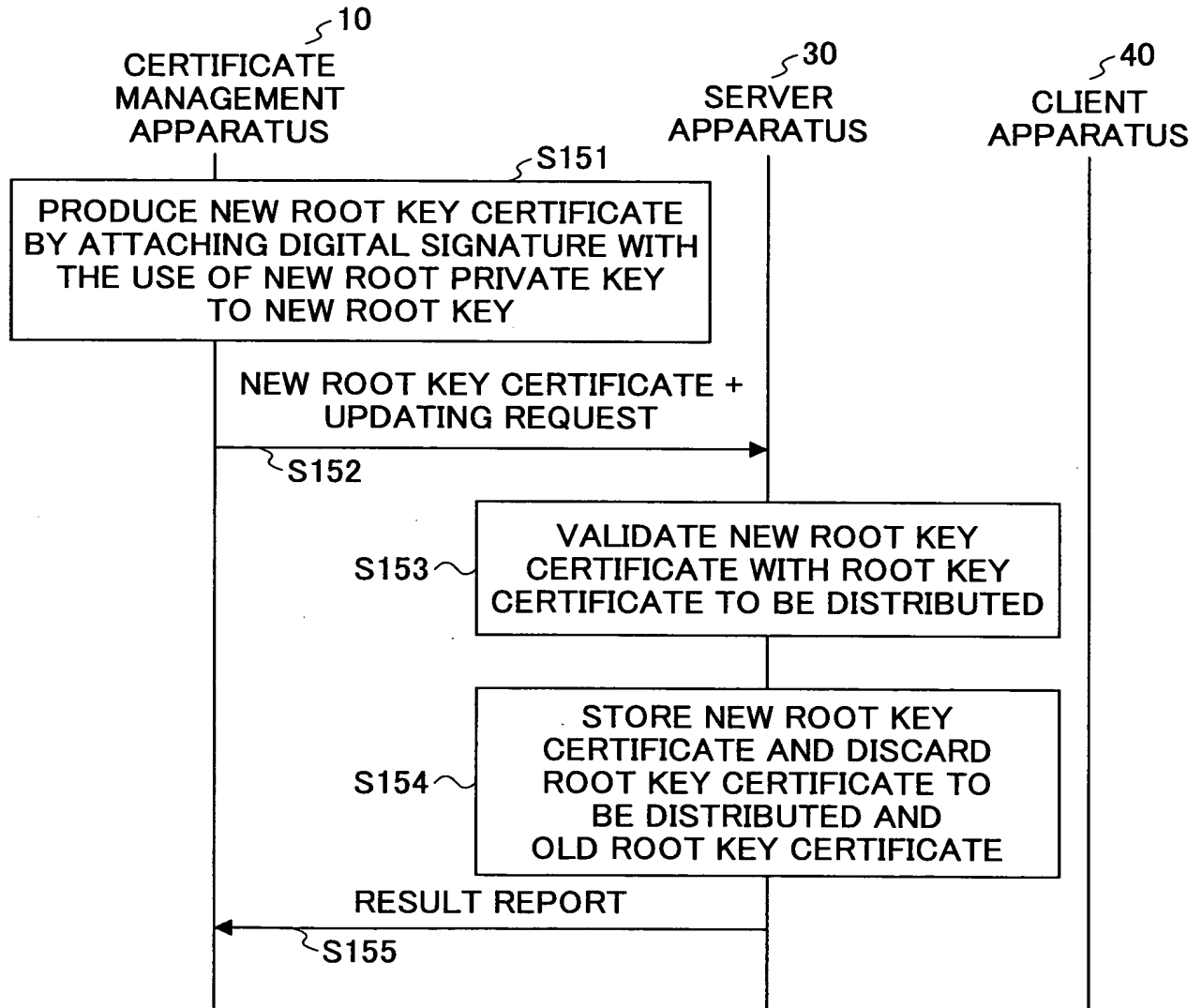


FIG.12

PROCESSING 6

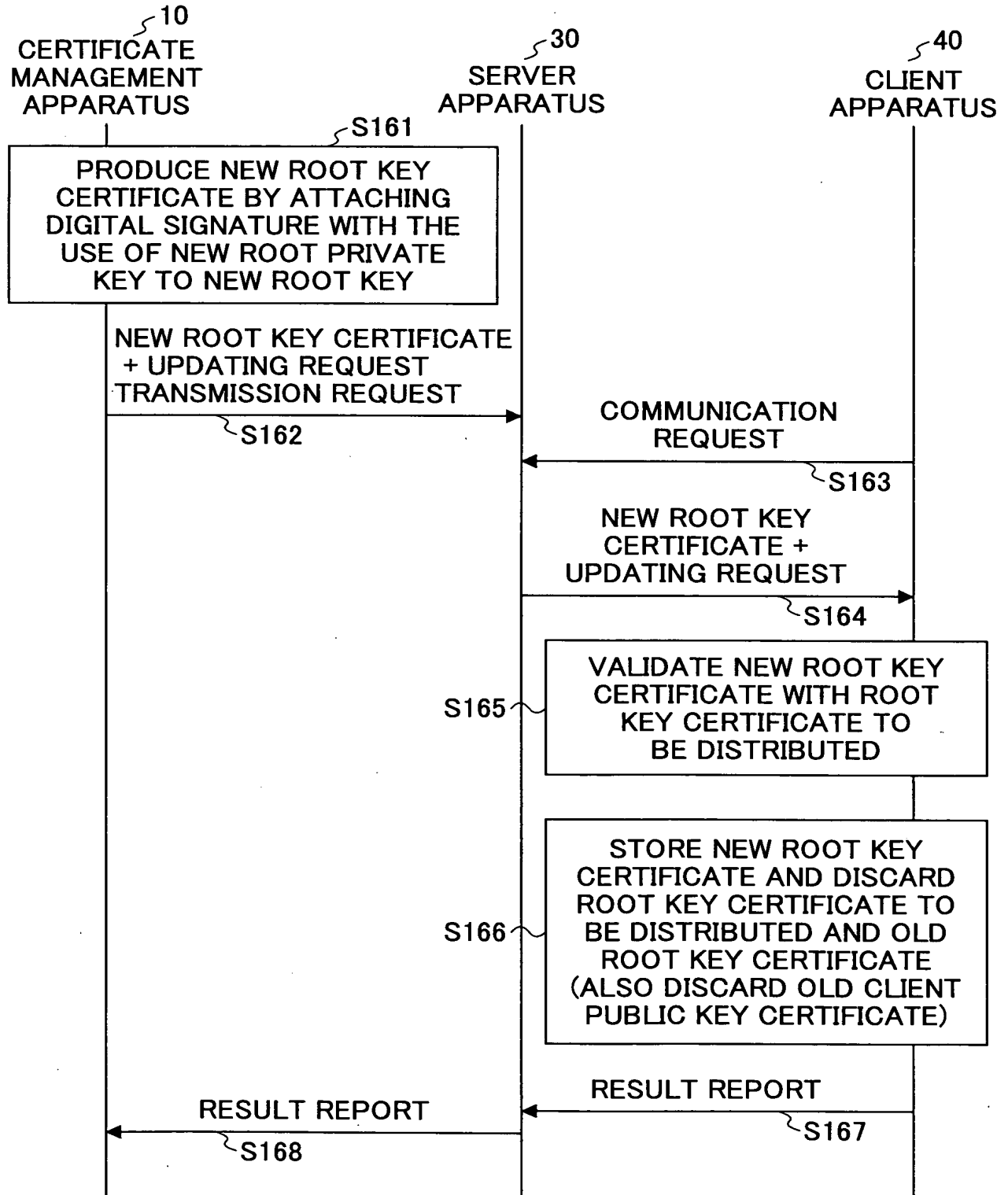


FIG.13

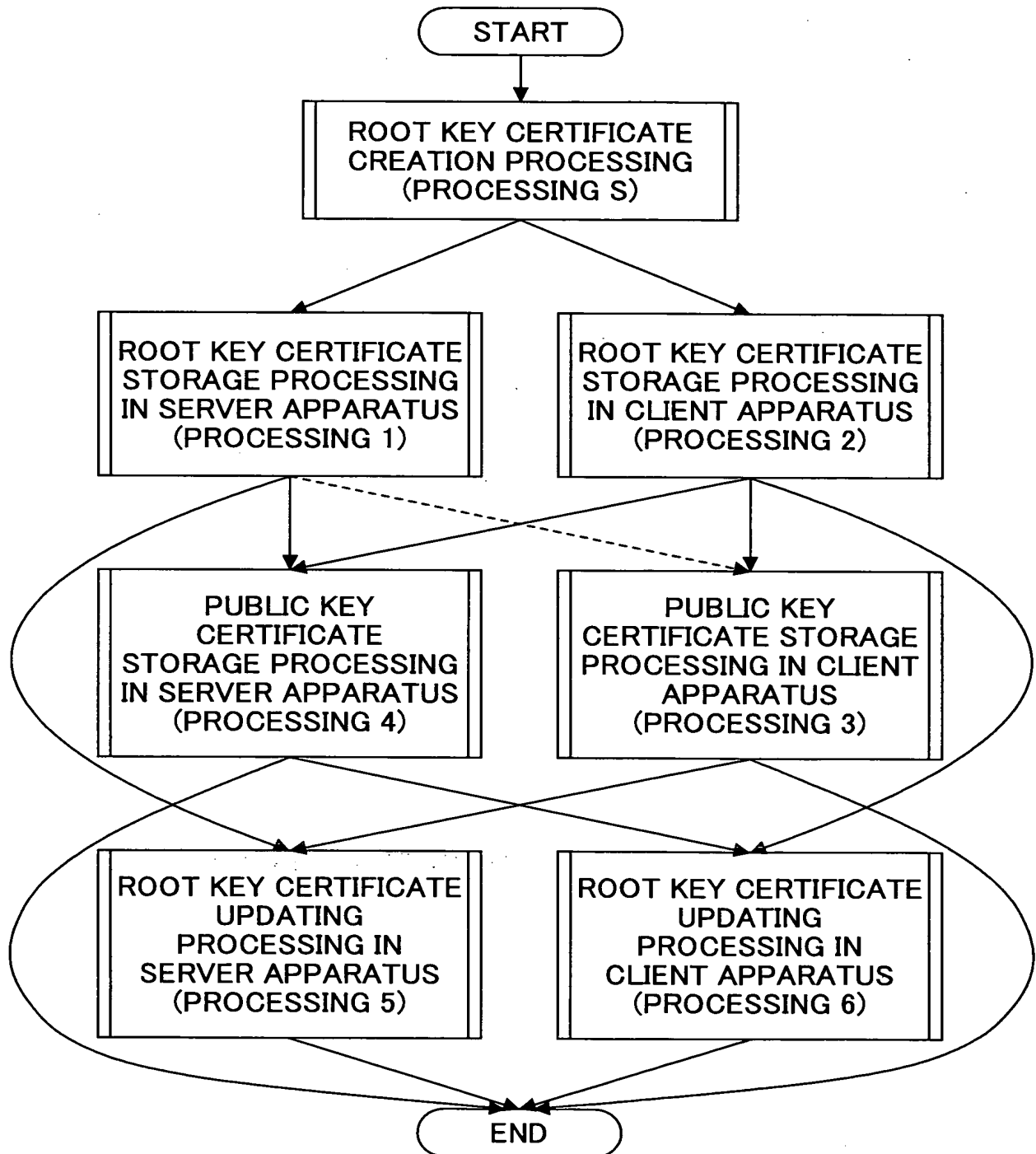


FIG.14

PROCESSING 1'

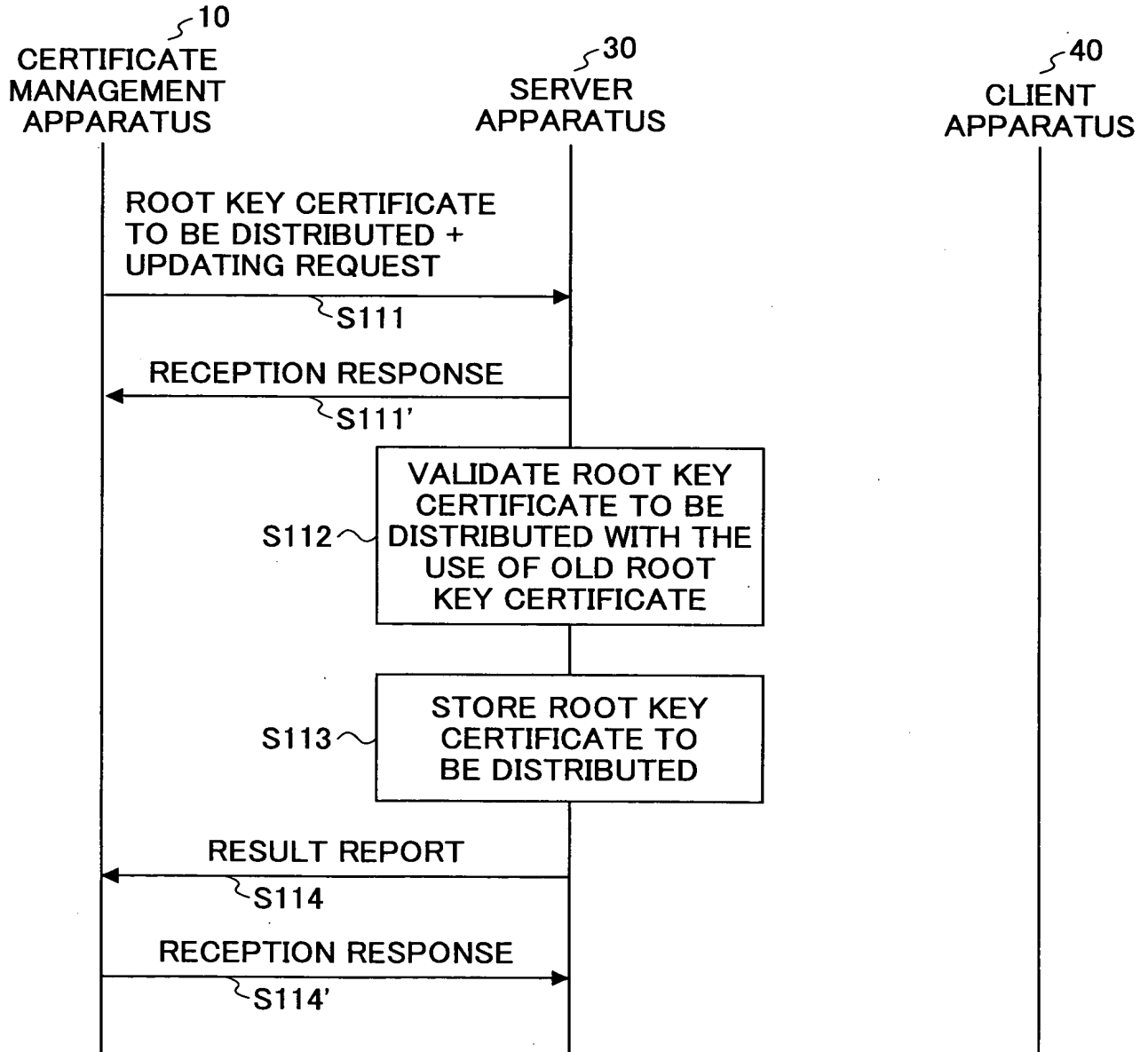


FIG.15

PROCESSING 2'

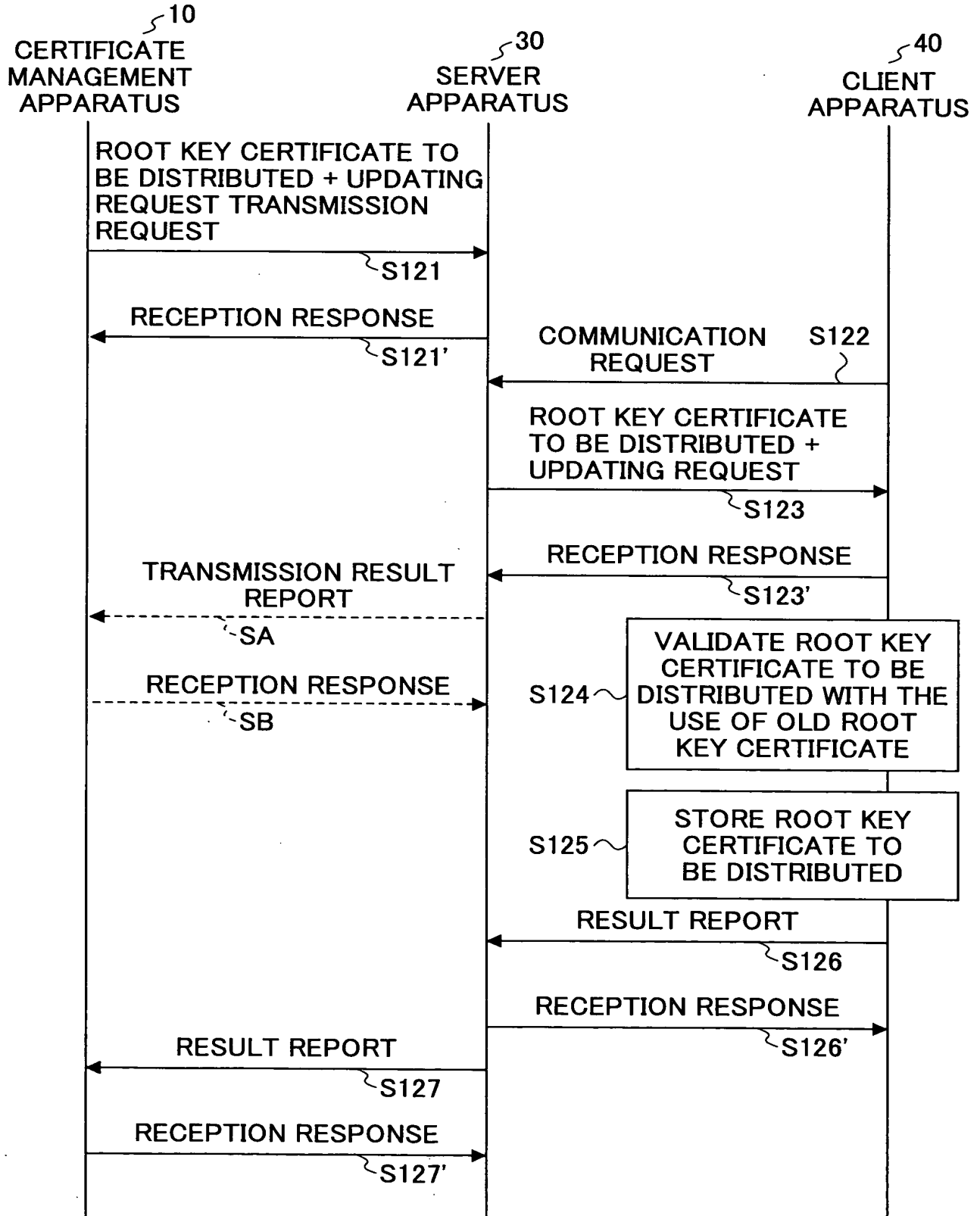


FIG.16

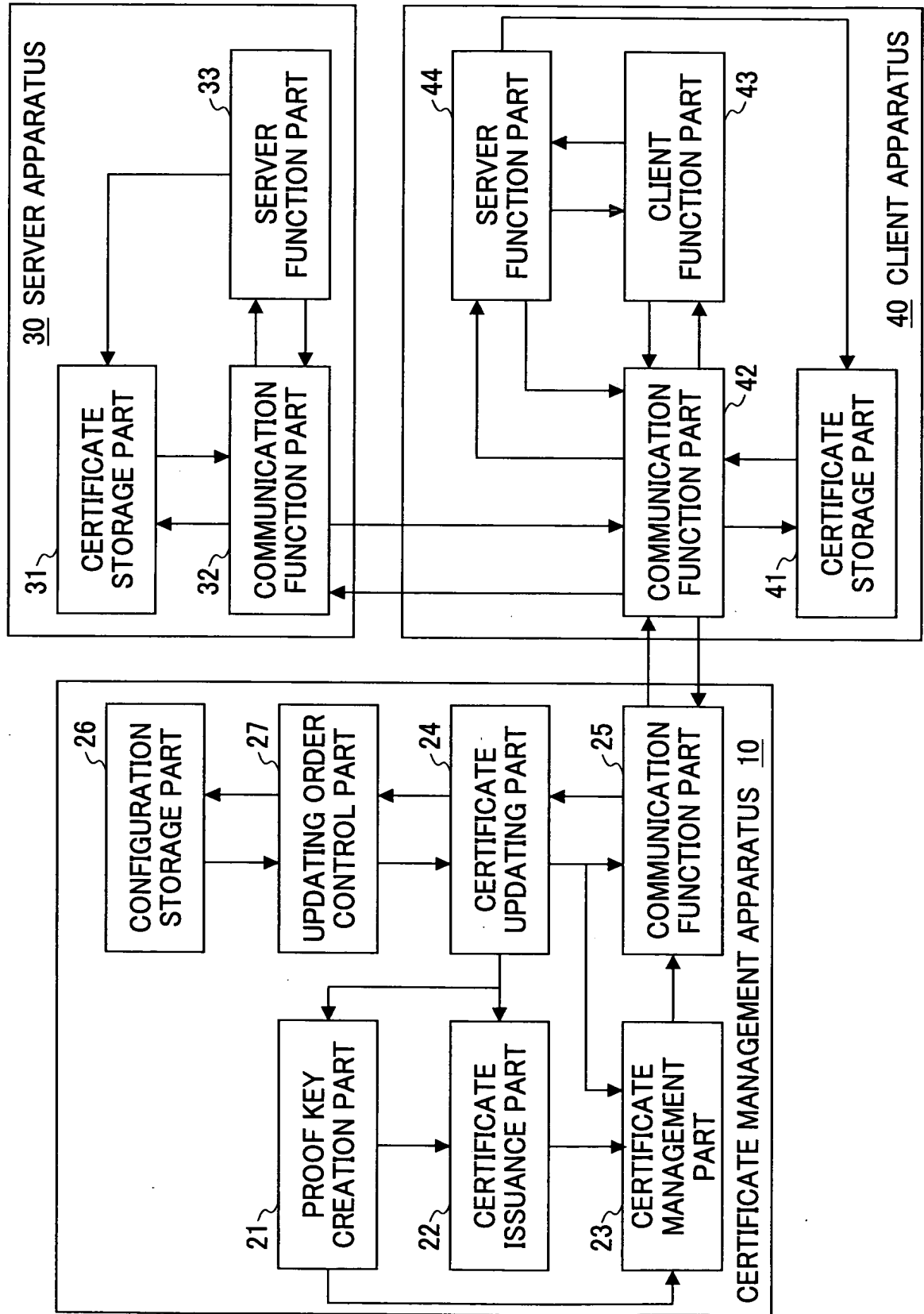


FIG.17

PROCESSING 11

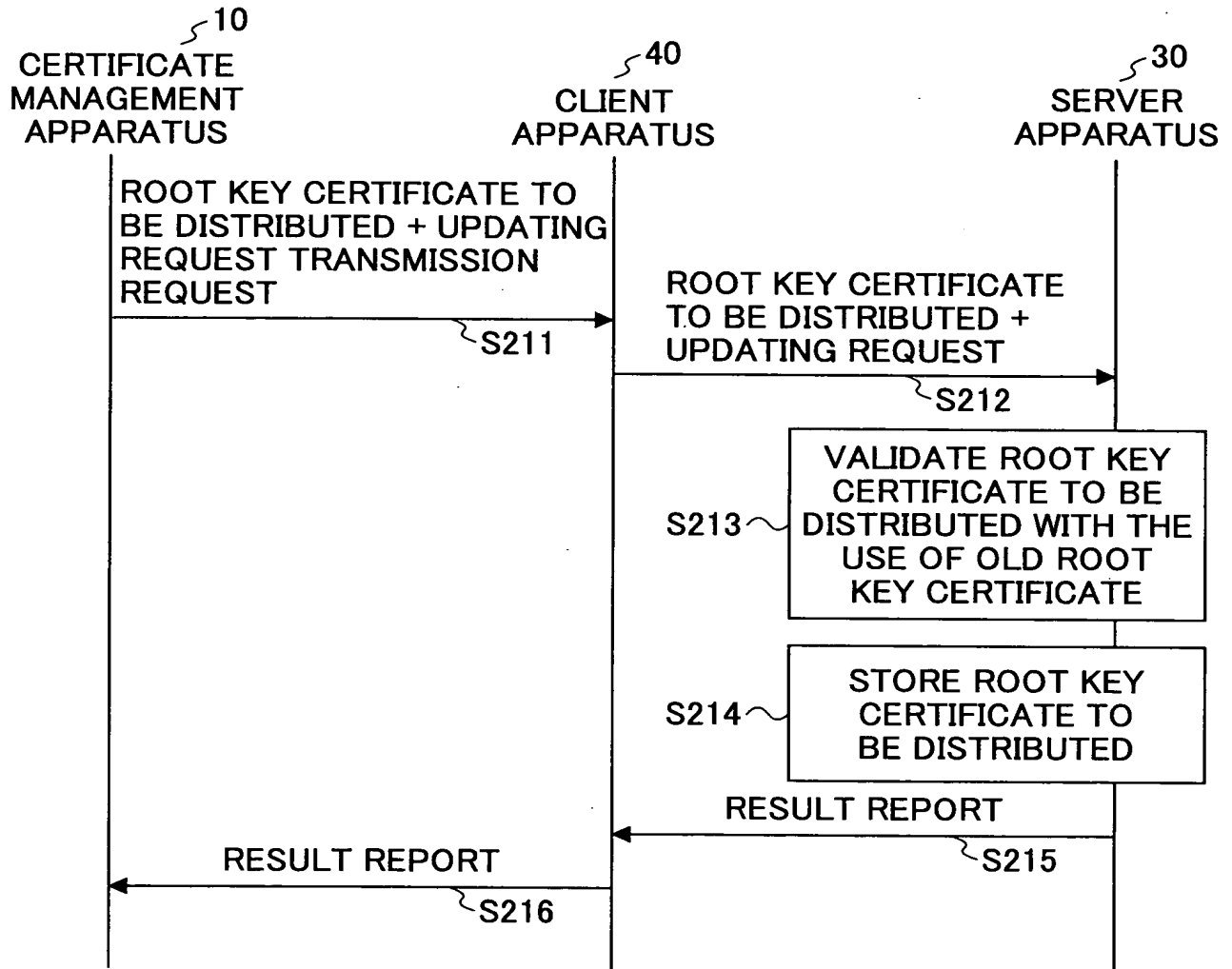


FIG.18

PROCESSING 12

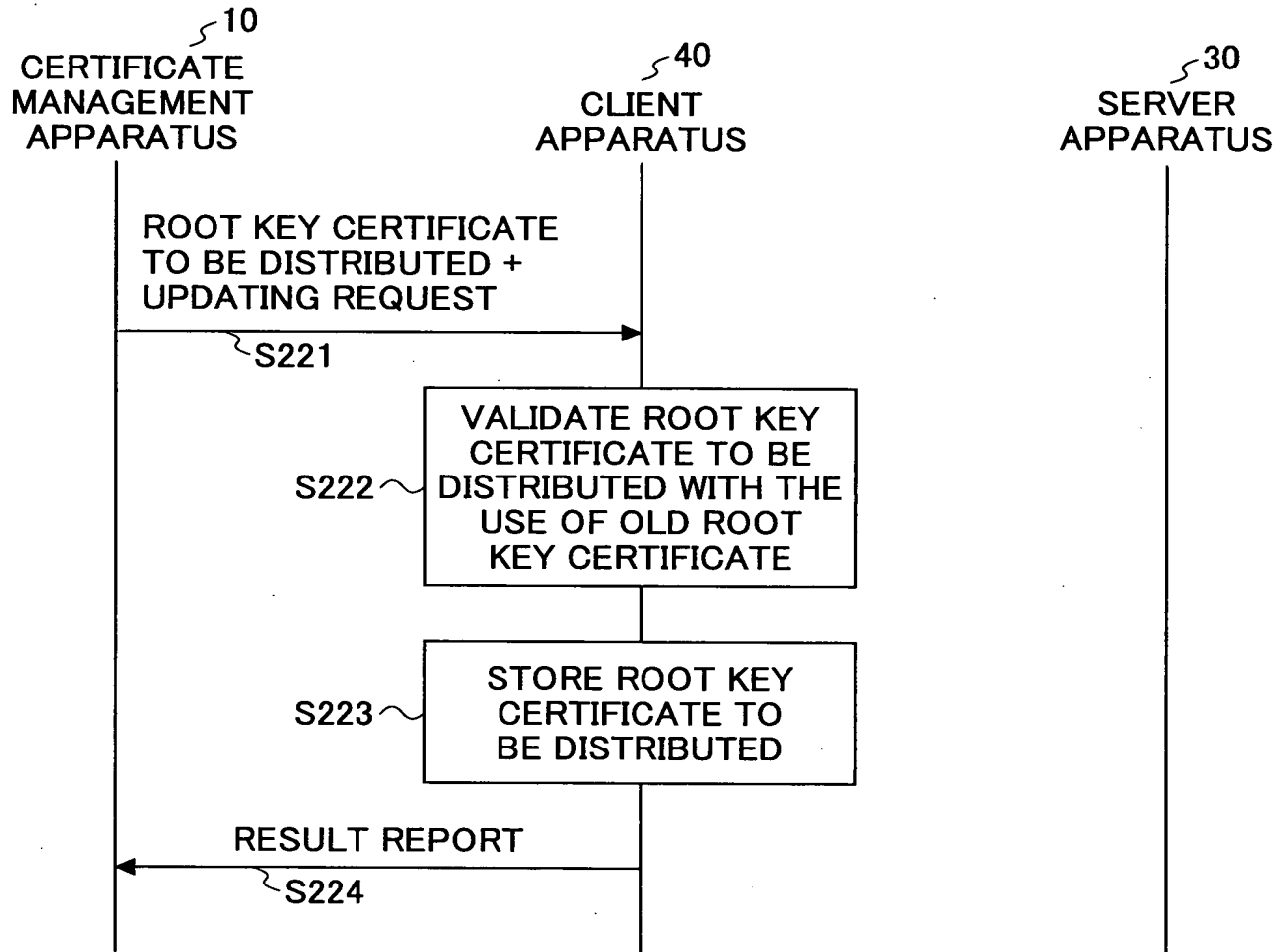


FIG.19

PROCESSING 13

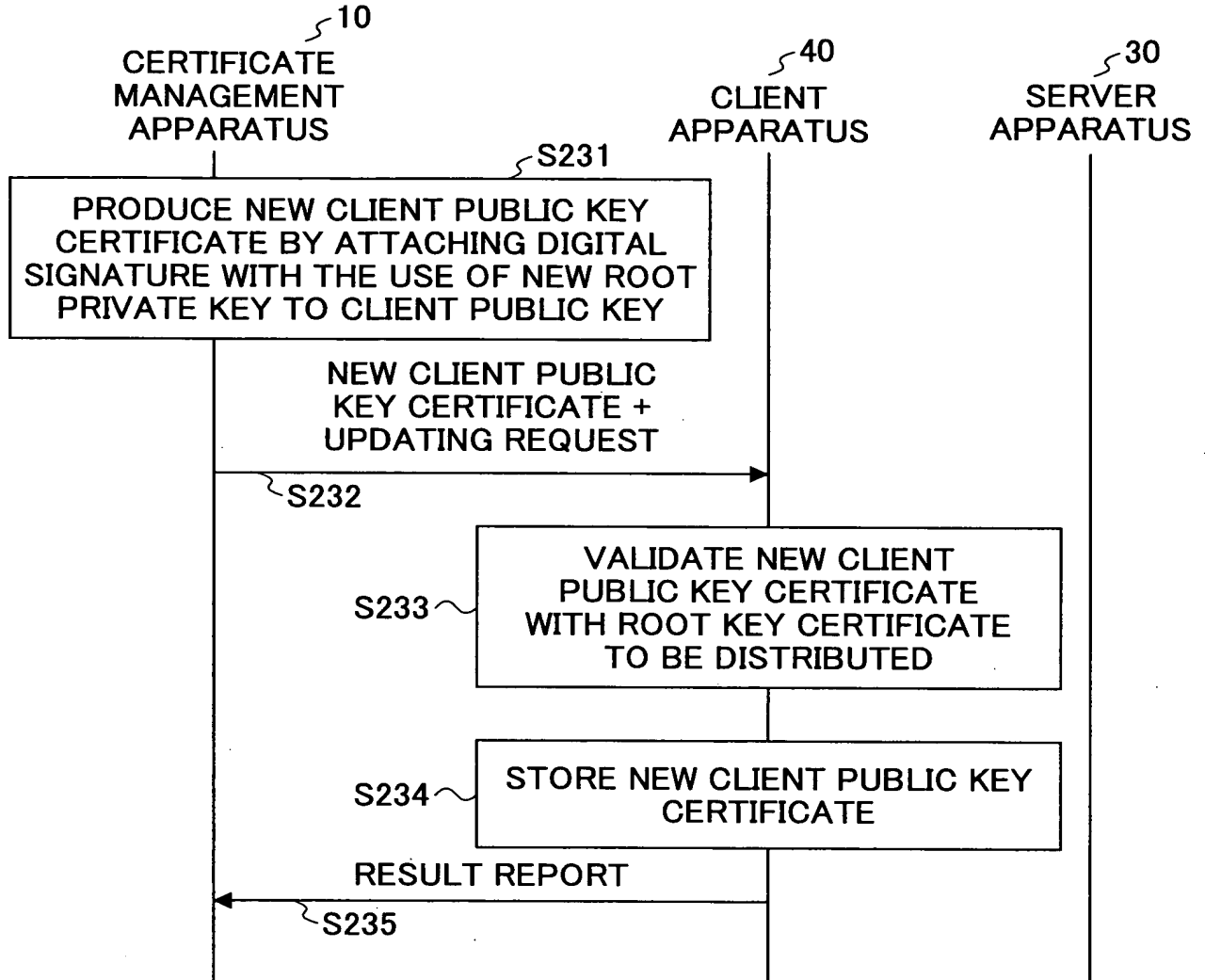


FIG.20

PROCESSING 14

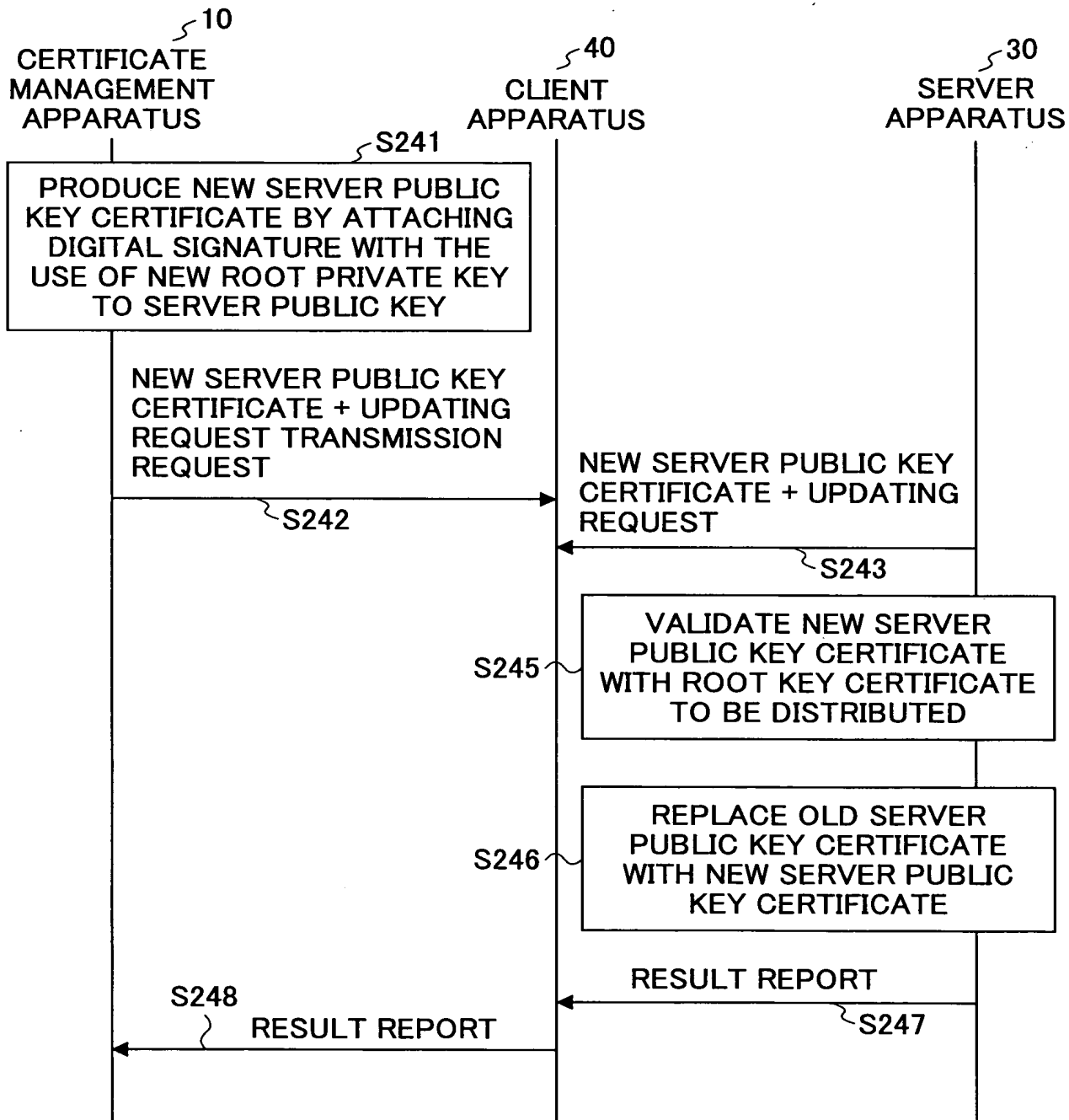


FIG.21

PROCESSING 15

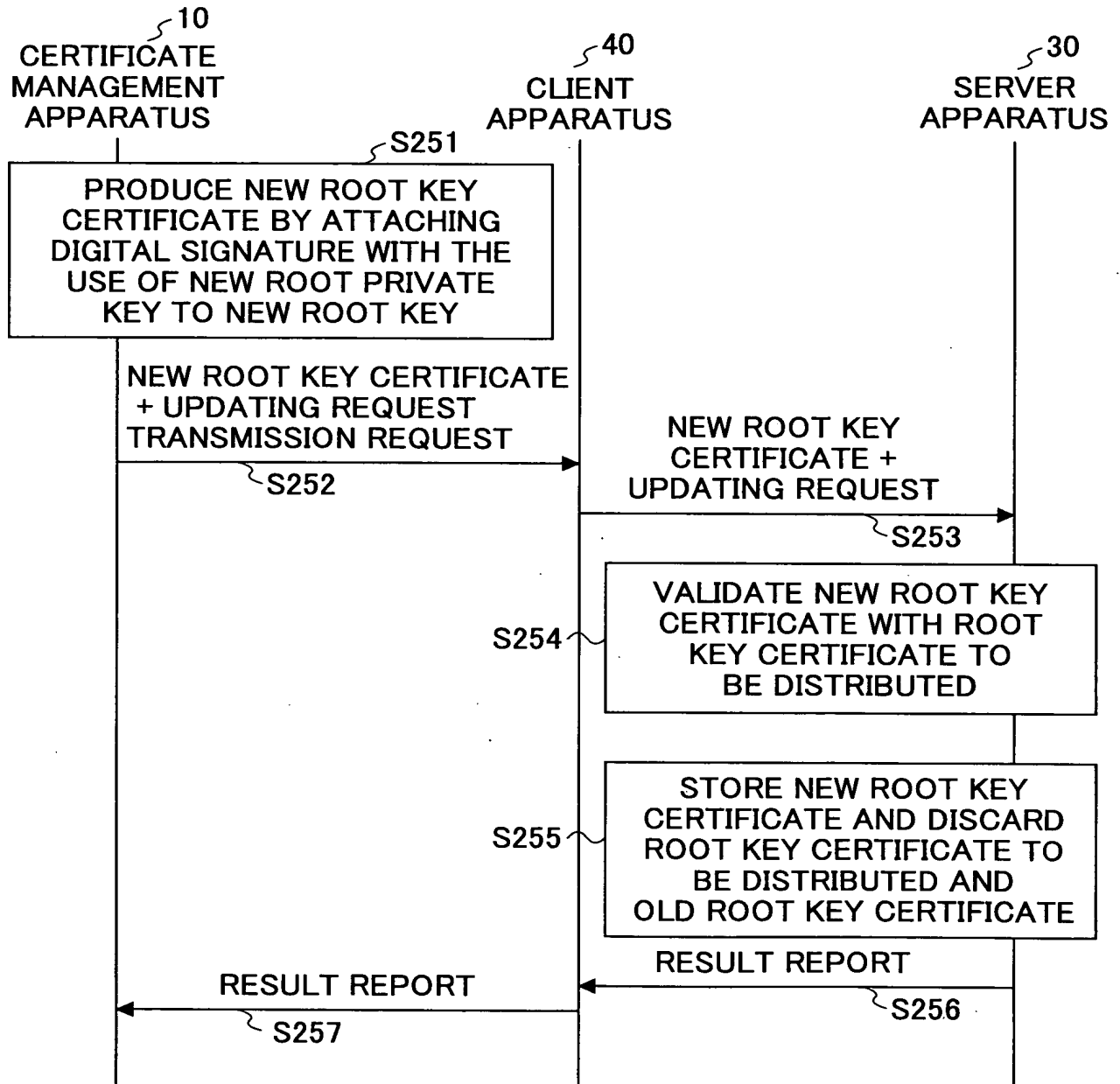


FIG.22

PROCESSING 16

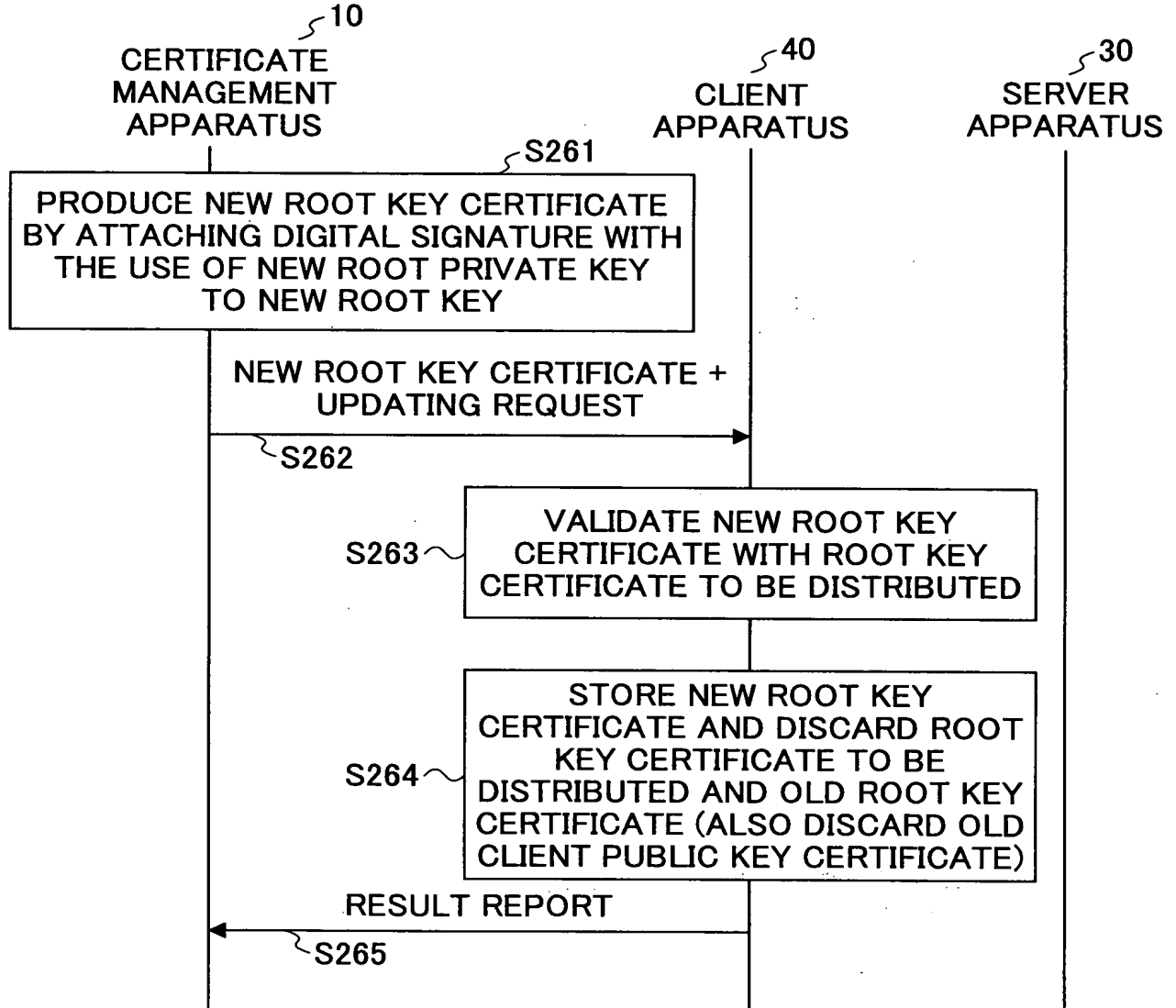


FIG.23

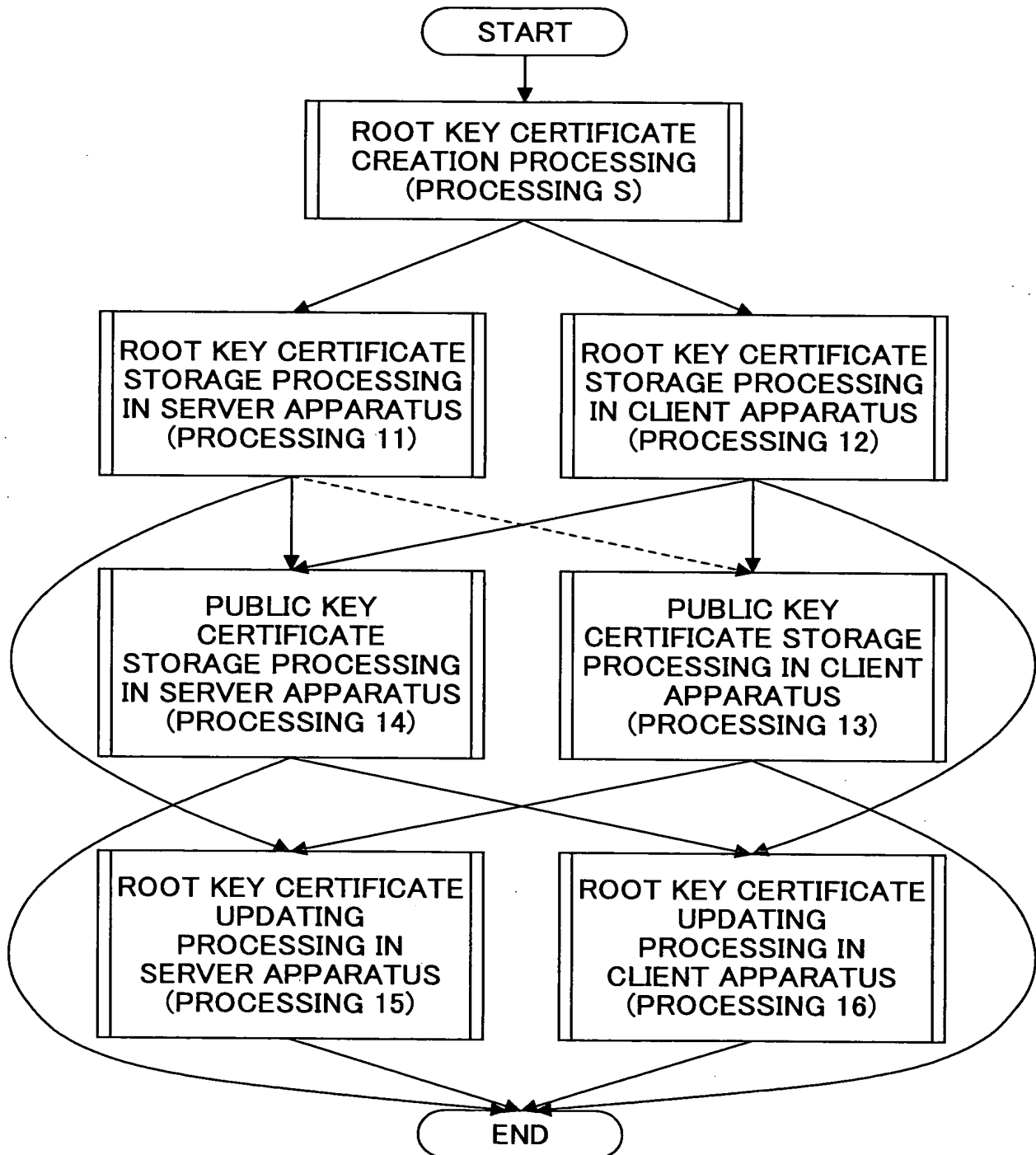


FIG.24

PROCESSING T

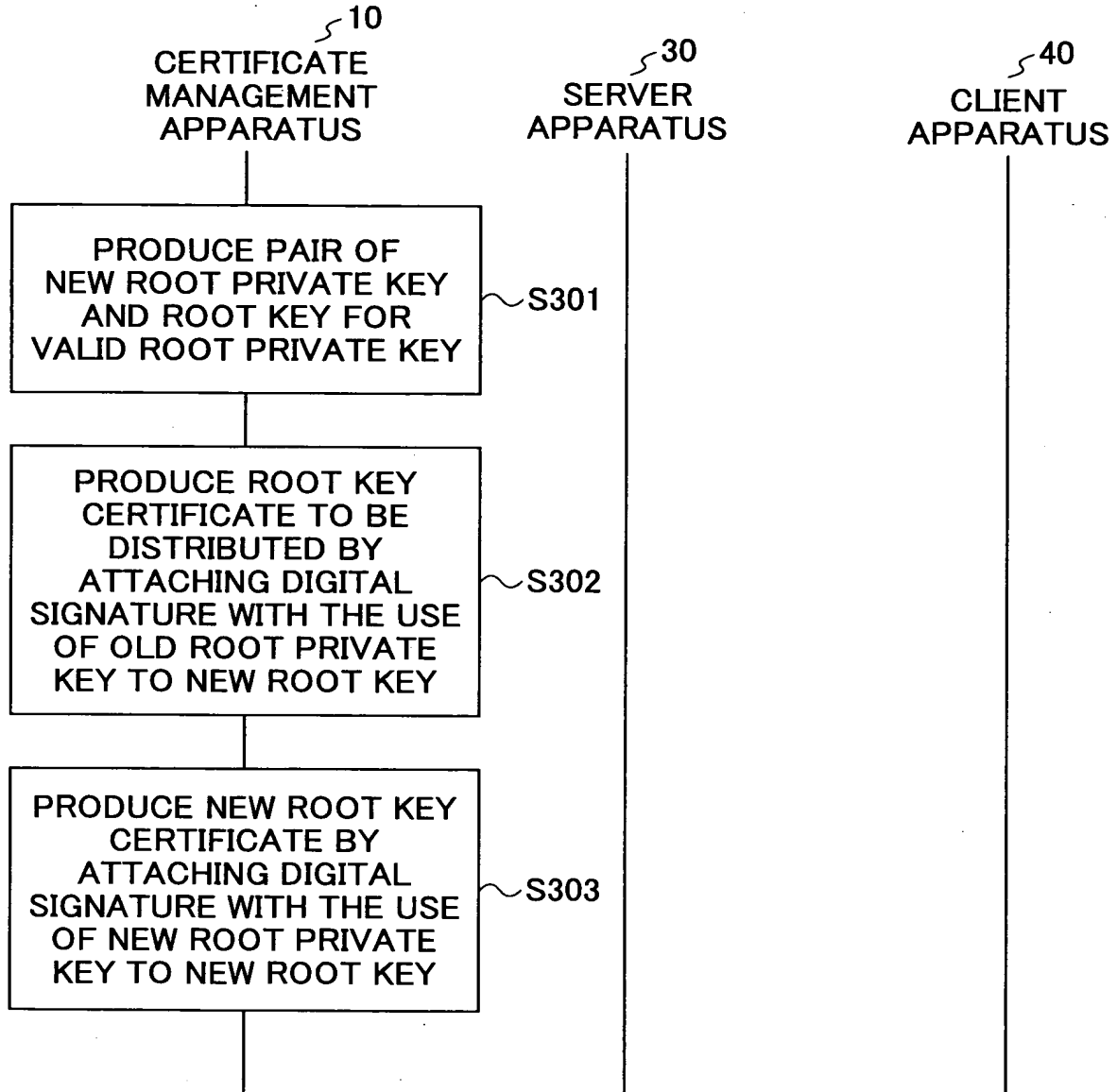


FIG.25

PROCESSING 21

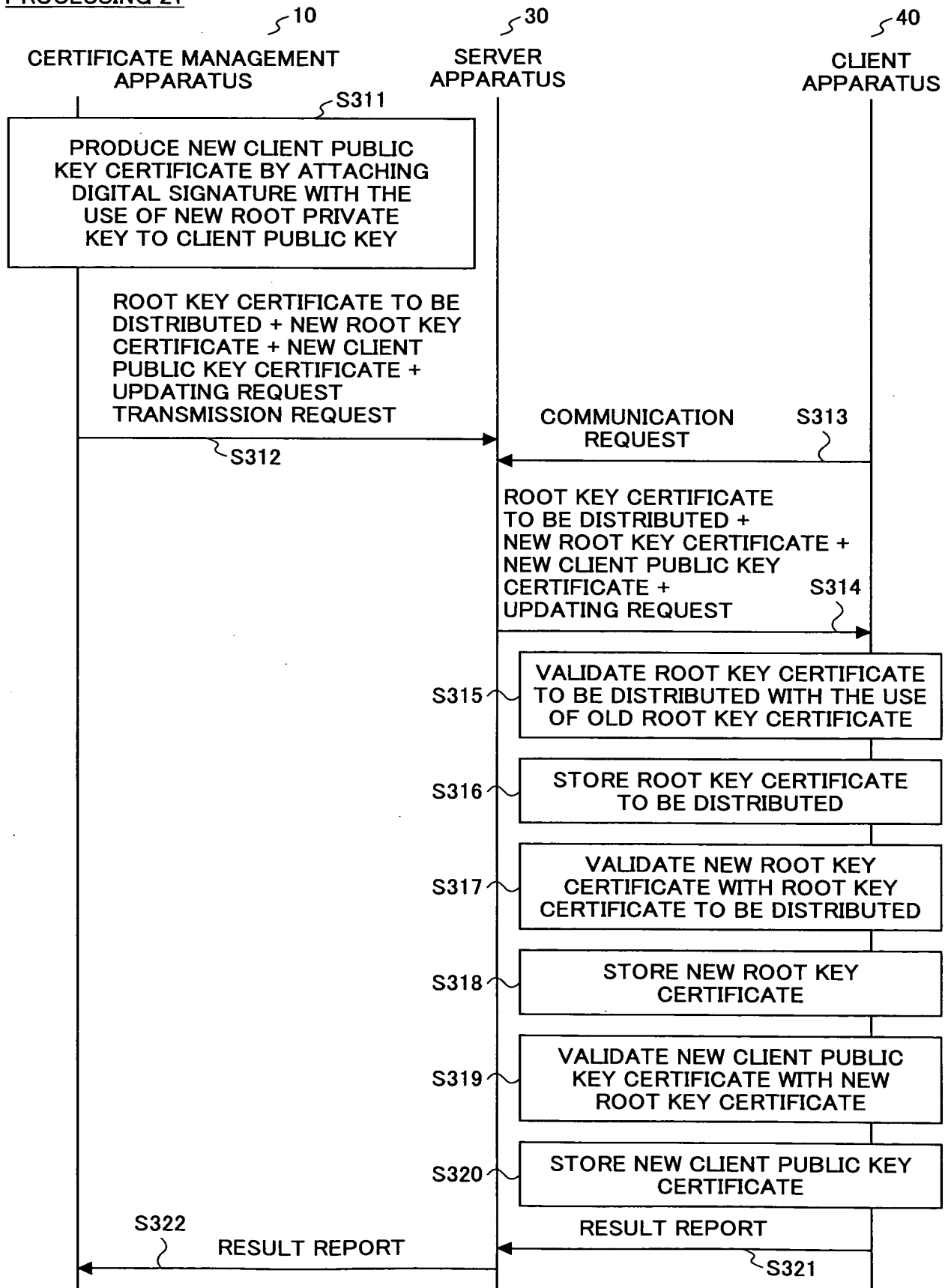


FIG.26

PROCESSING 22

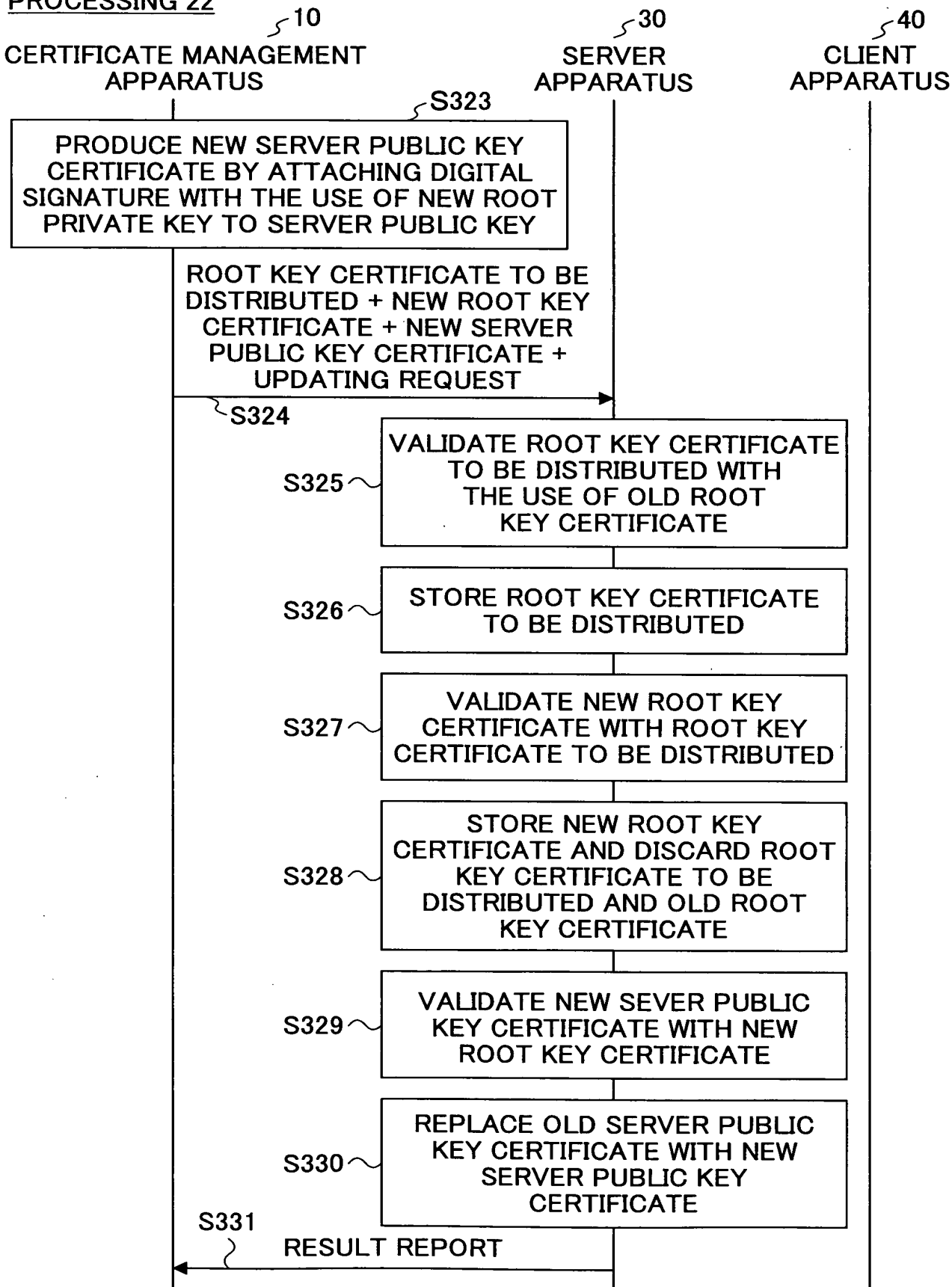


FIG.27

PROCESSING 23

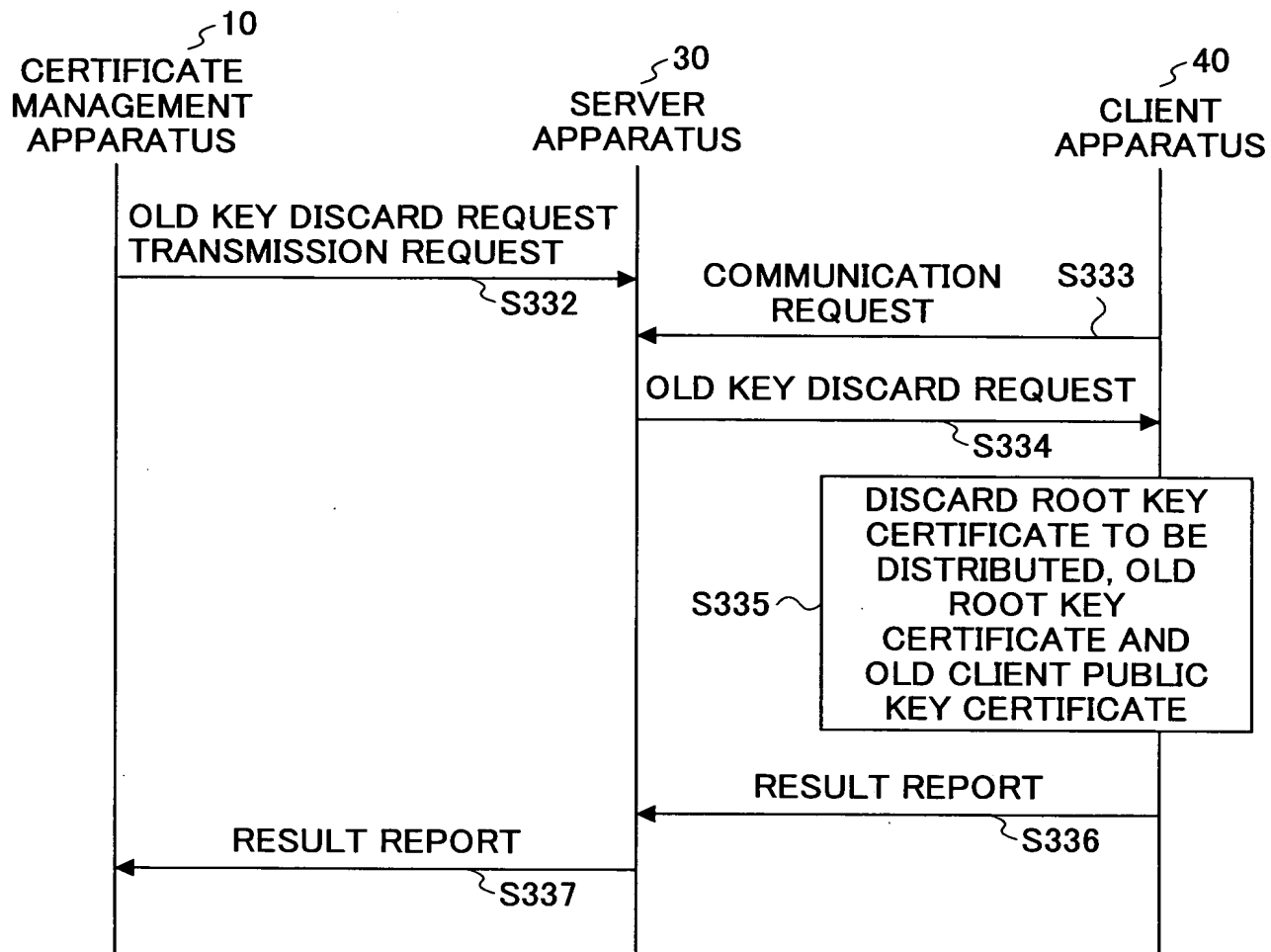


FIG.28

PROCESSING 31

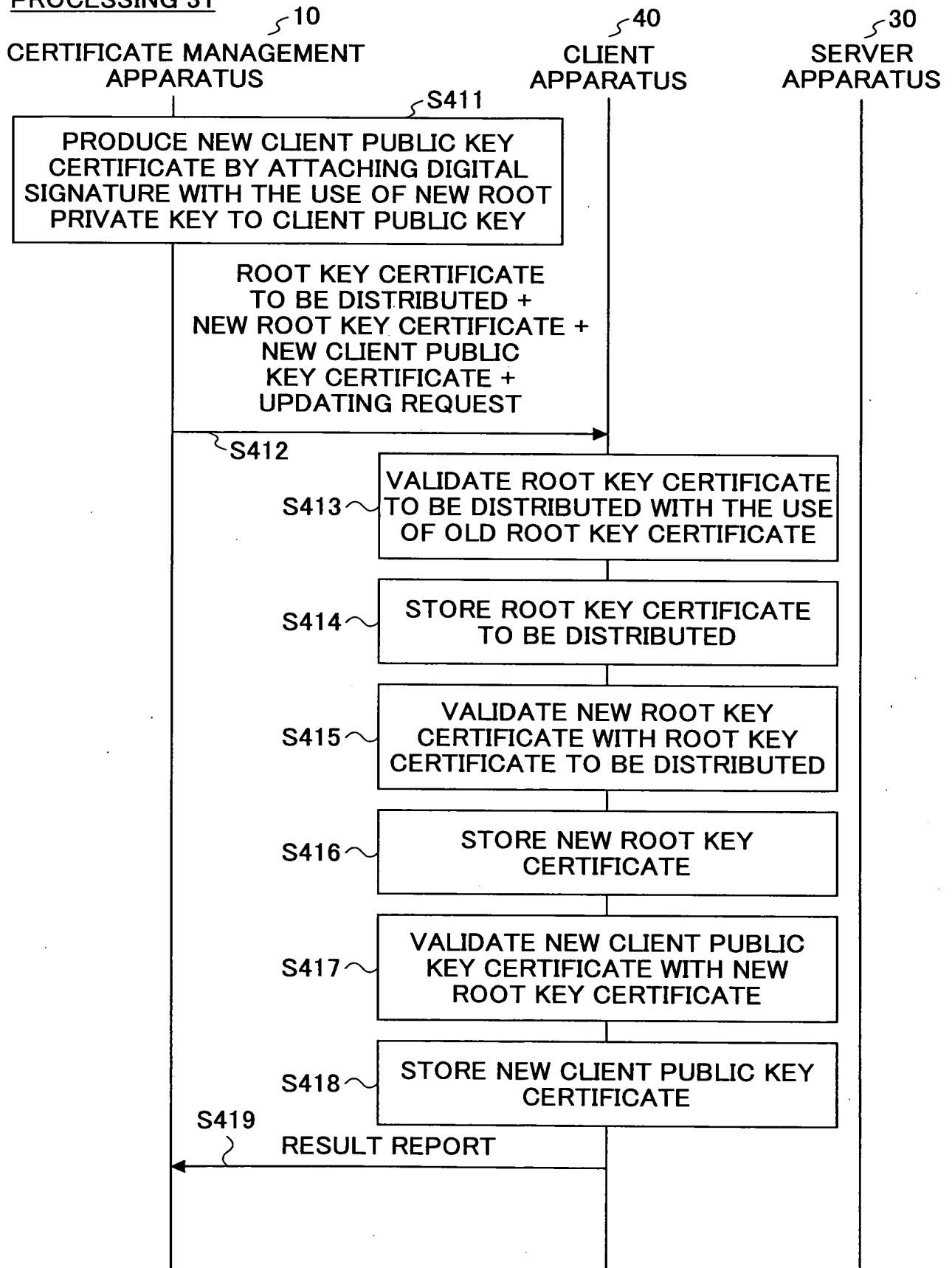


FIG.29

PROCESSING 32

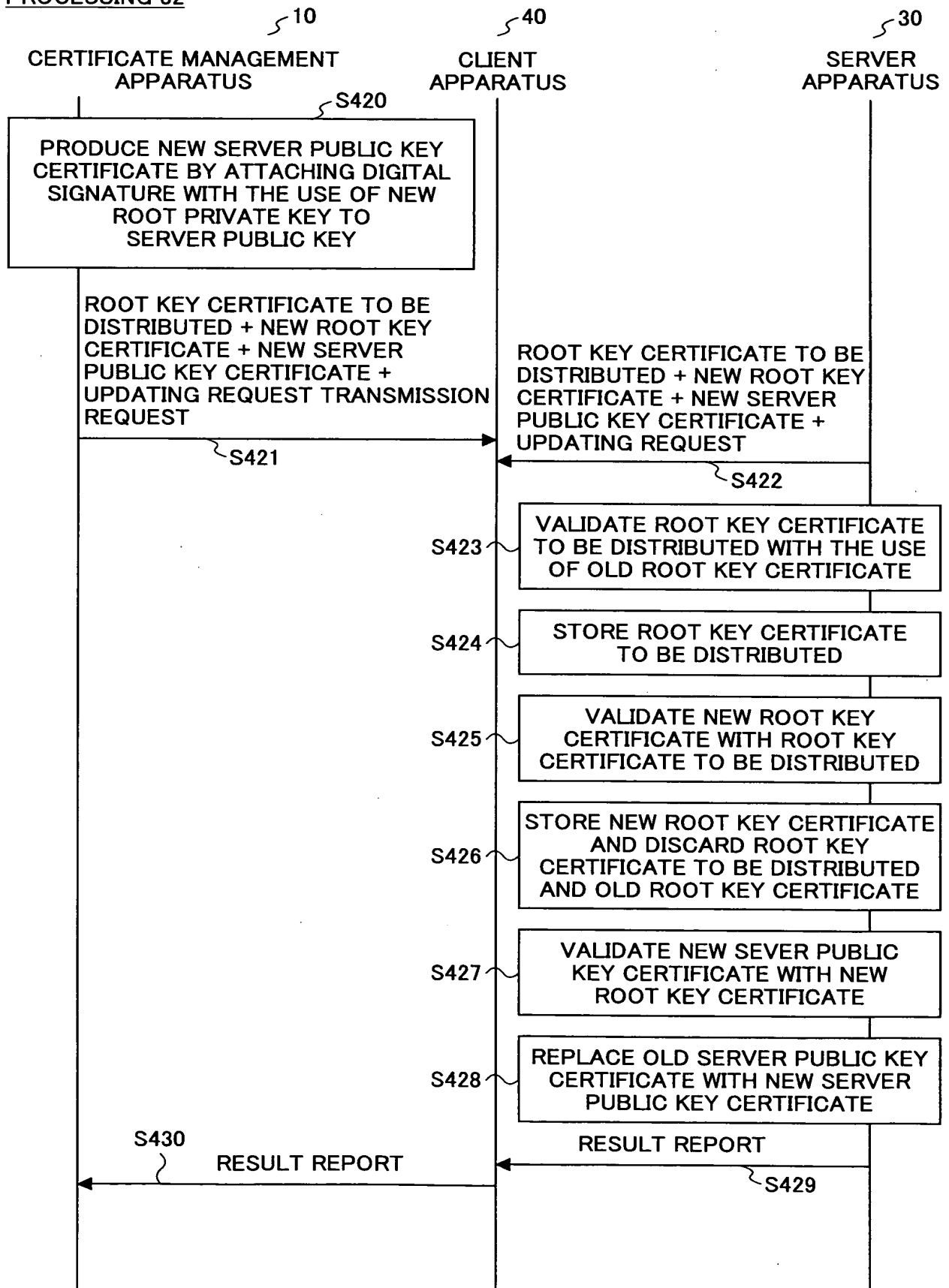


FIG.30

PROCESSING 33

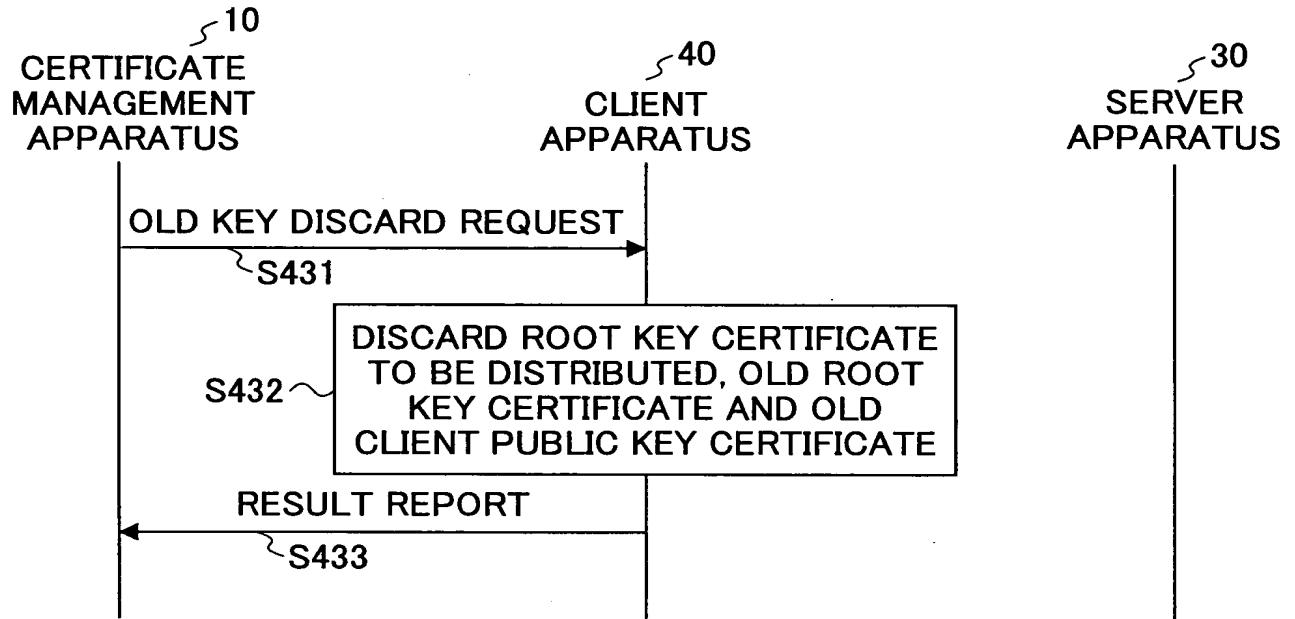


FIG.31

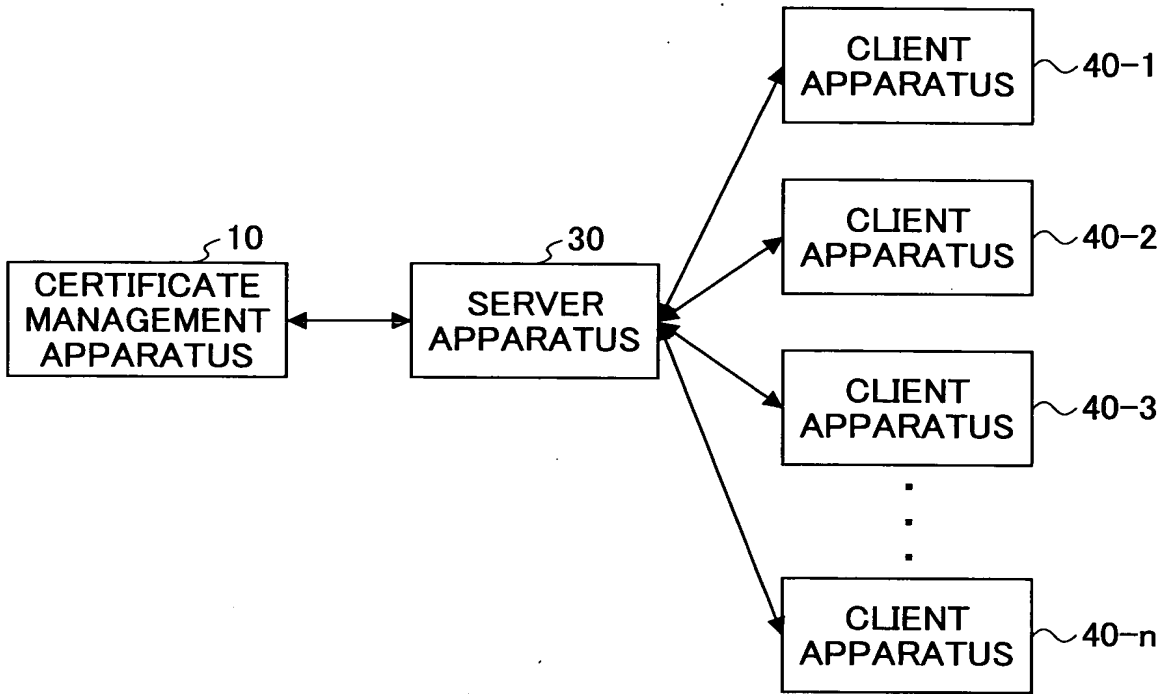


FIG.32

| NODE ID | |
|--|-----------------|
| DIRECT COMMUNICATION WITH MANAGEMENT APPARATUS AVAILABILITY | |
| COMMUNICATION COUNTERPART NODE ID | CLIENT/SERVER |
| | ROOT KEY ON USE |
| | UPDATE STATE |
| | ... |
| . | ... |
| | ... |
| | ... |
| . | ... |
| | ... |
| | ... |

FIG.33A

| SERVER APPARATUS 30 | |
|--------------------------------|---------------|
| DIRECT COMMUNICATION AVAILABLE | |
| CLIENT APPARATUS 40-1 | SERVER |
| | ROOT KEY A |
| | UPDATE NEEDED |
| CLIENT APPARATUS 40-2 | SERVER |
| | ROOT KEY A |
| | UPDATE NEEDED |
| CLIENT APPARATUS 40-3 | SERVER |
| | ROOT KEY A |
| | UPDATE NEEDED |
| . | ... |
| | ... |
| | ... |
| CLIENT APPARATUS 40-n | SERVER |
| | ROOT KEY A |
| | UPDATE NEEDED |

FIG.33B

| CLIENT APPARATUS 40-1 | |
|------------------------------------|--|
| DIRECT COMMUNICATION NOT AVAILABLE | |
| N/A | |
| | |
| | |

FIG.33C

| CLIENT APPARATUS 40-1 | |
|------------------------------------|---------------|
| DIRECT COMMUNICATION NOT AVAILABLE | |
| SERVER APPARATUS 30 | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |

FIG.34

PROCESSING 3-1

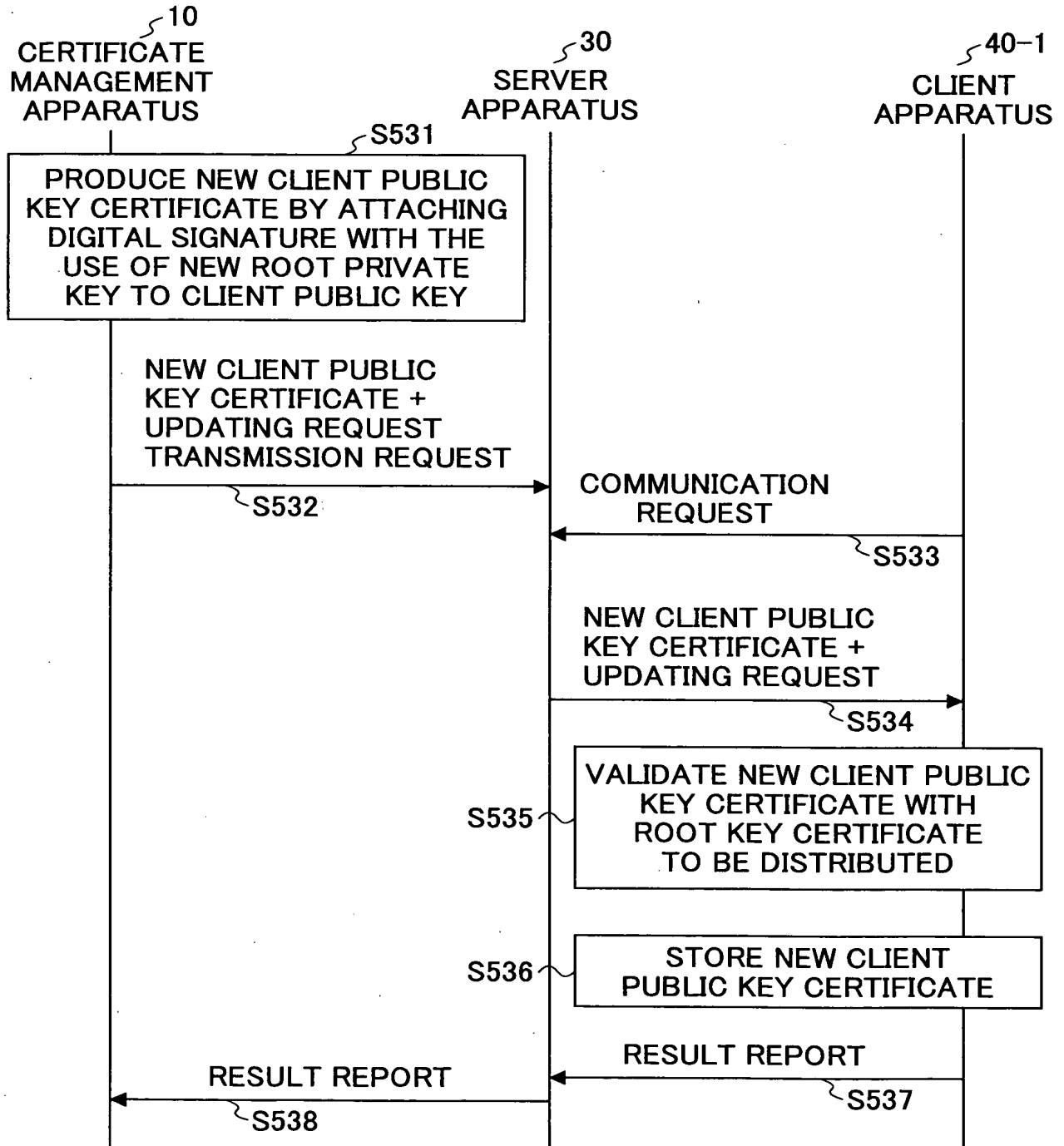


FIG.35

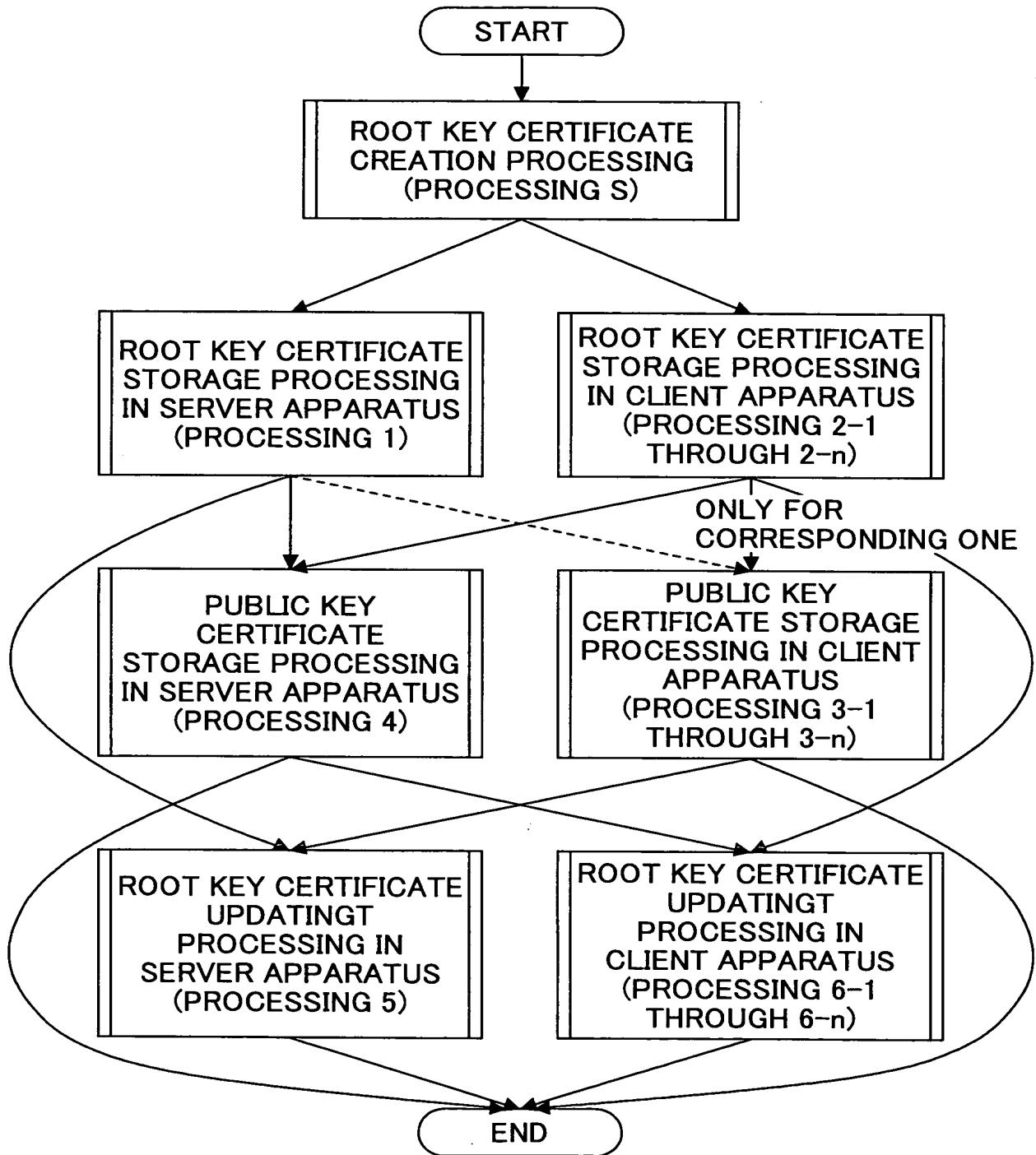


FIG.36

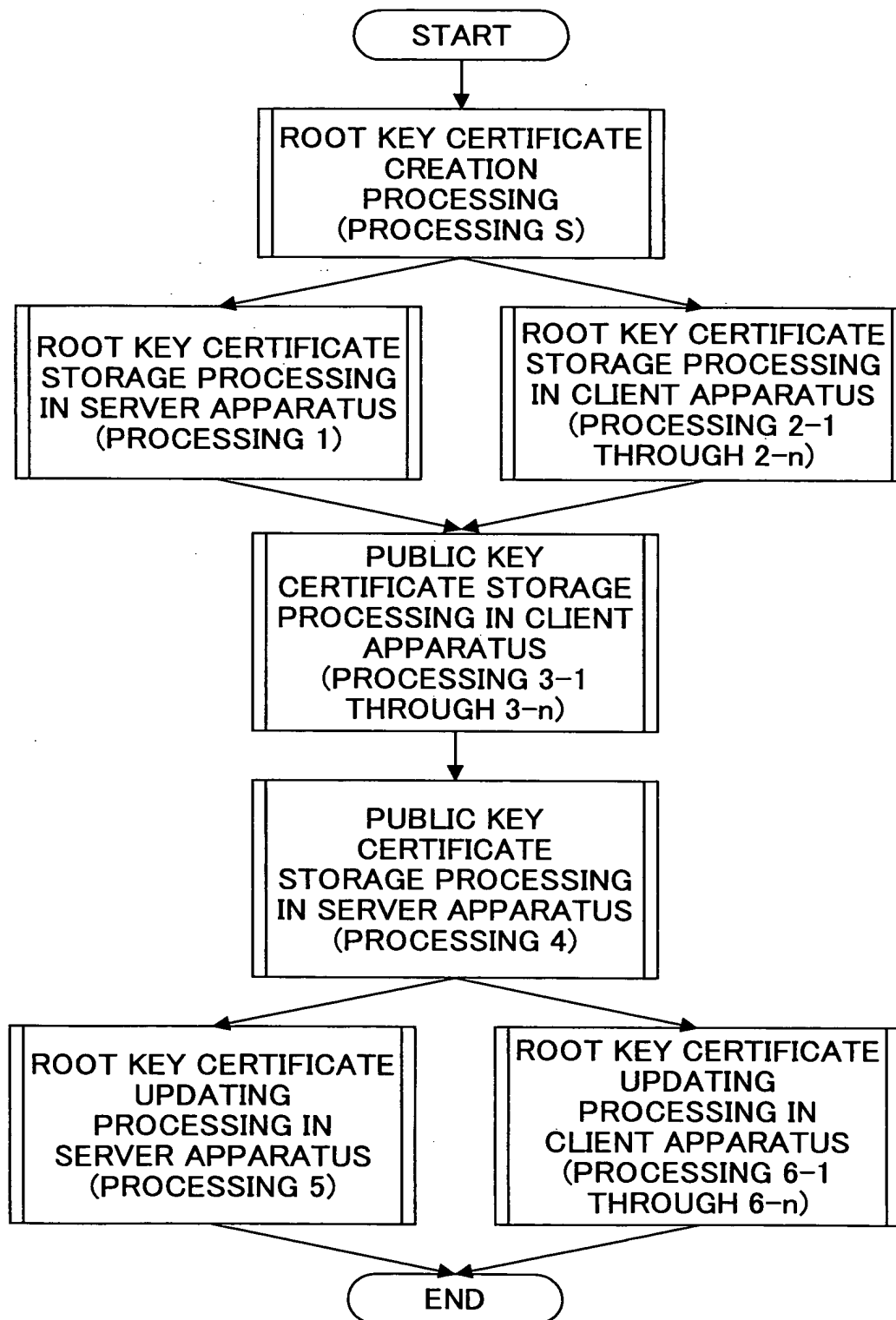


FIG.37

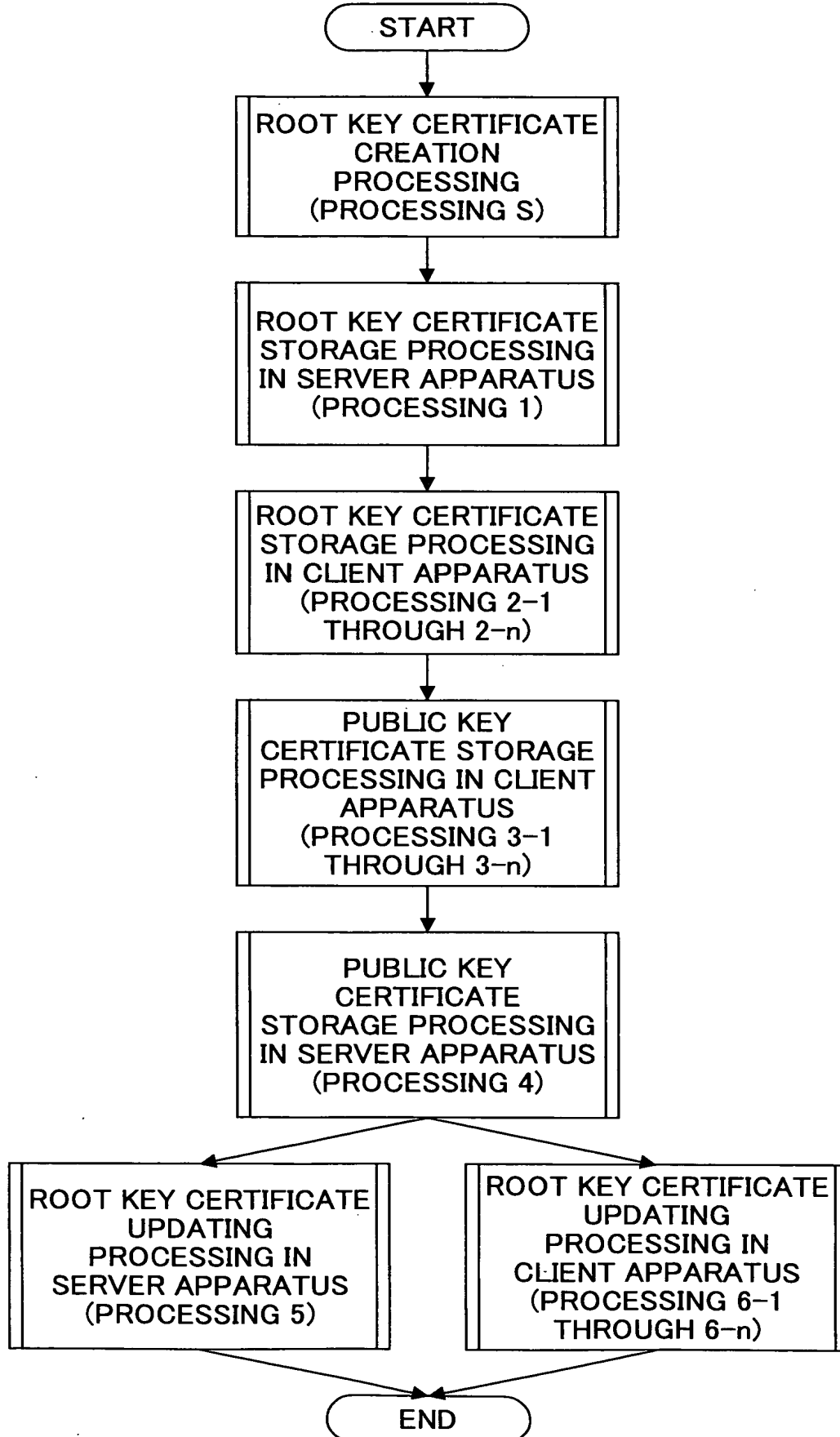


FIG.38

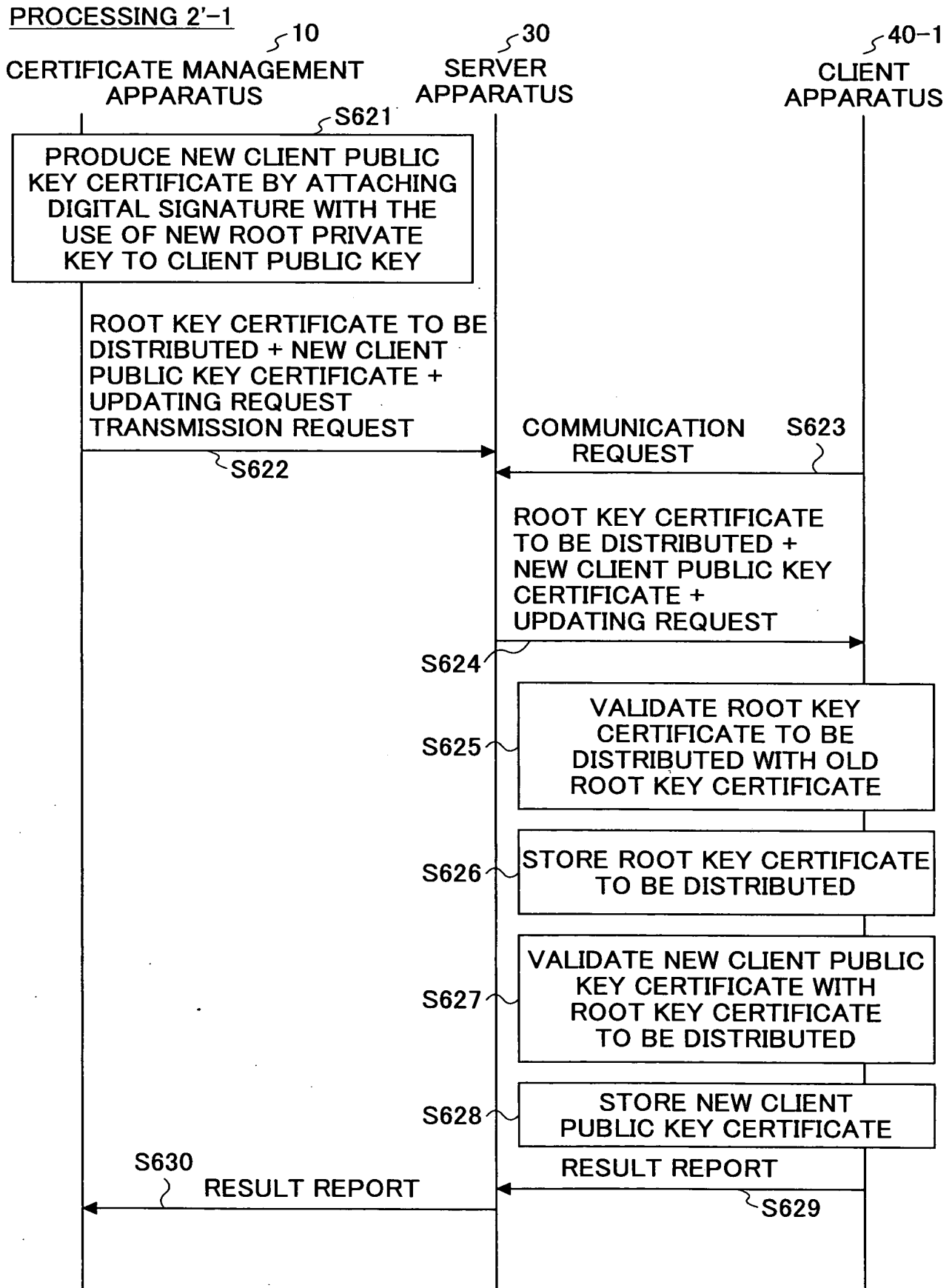


FIG.39

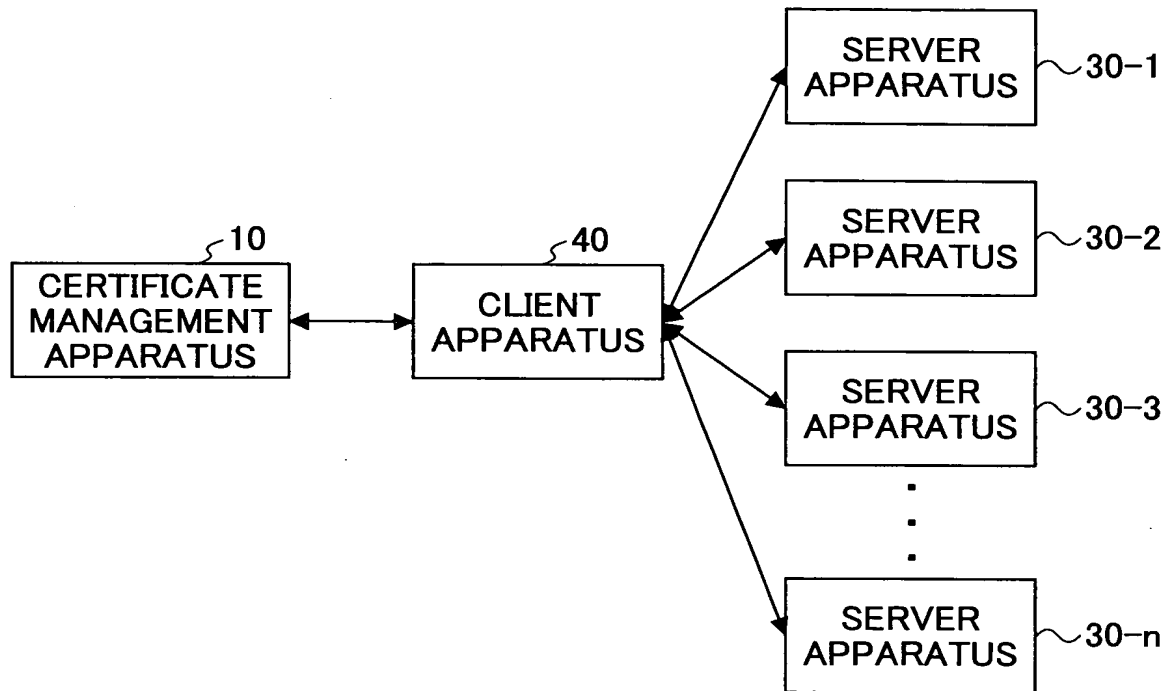


FIG.40A

| CLIENT APPARATUS 40 | |
|--------------------------------|---------------|
| DIRECT COMMUNICATION AVAILABLE | |
| SERVER APPARATUS 30-1 | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |
| SERVER APPARATUS 30-2 | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |
| SERVER APPARATUS 30-3 | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |
| . | ... |
| | ... |
| | ... |
| SERVER APPARATUS 30-n | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |

FIG.40B

| SERVER 30-1 | |
|------------------------------------|--|
| DIRECT COMMUNICATION NOT AVAILABLE | |
| N/A | |
| | |
| | |

FIG.40C

| SERVER 30-1 | |
|------------------------------------|---------------|
| DIRECT COMMUNICATION NOT AVAILABLE | |
| CLIENT APPARATUS 30 | CLIENT |
| | ROOT KEY A |
| | UPDATE NEEDED |

FIG.41

PROCESSING 14-1

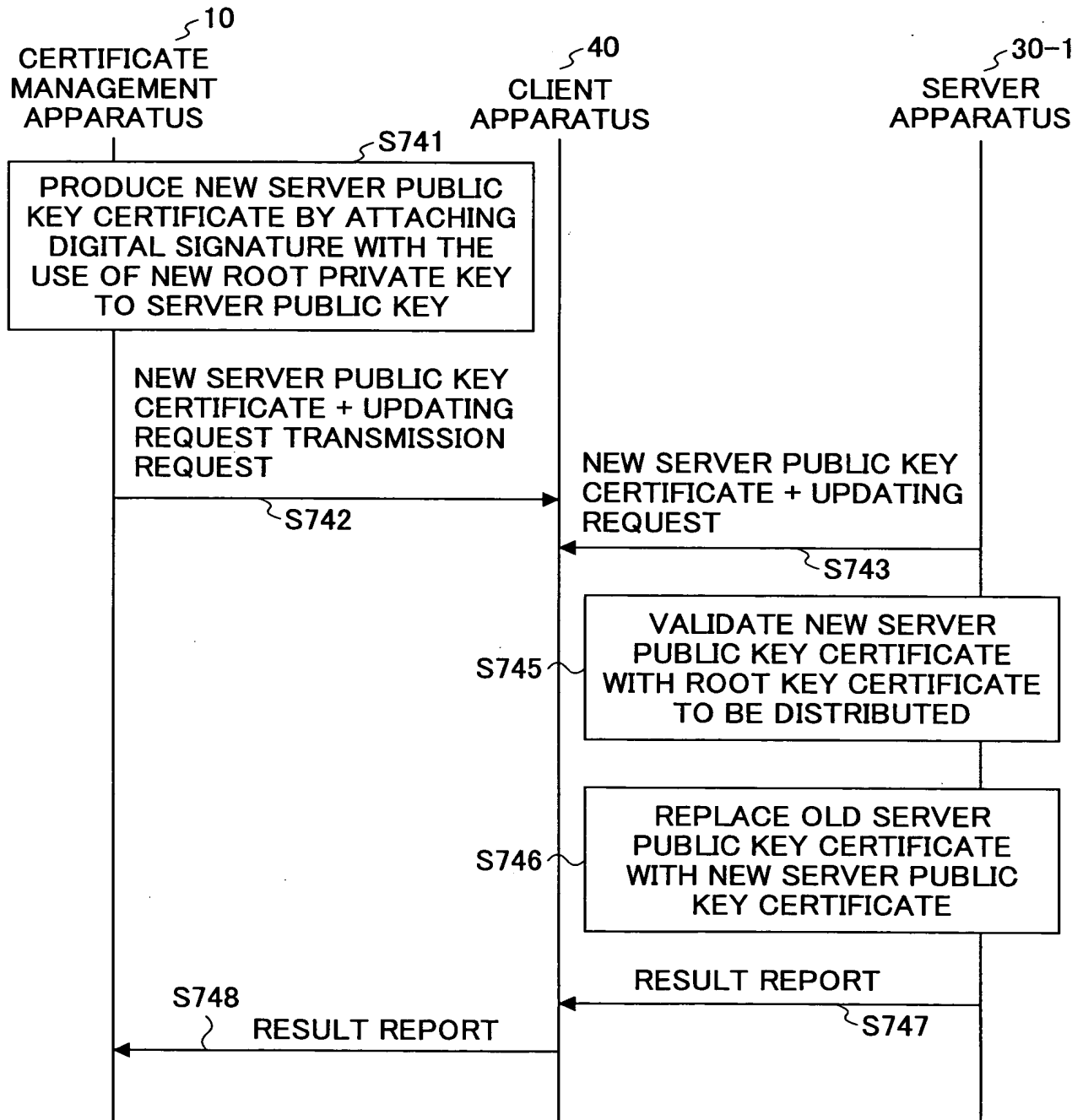


FIG.42

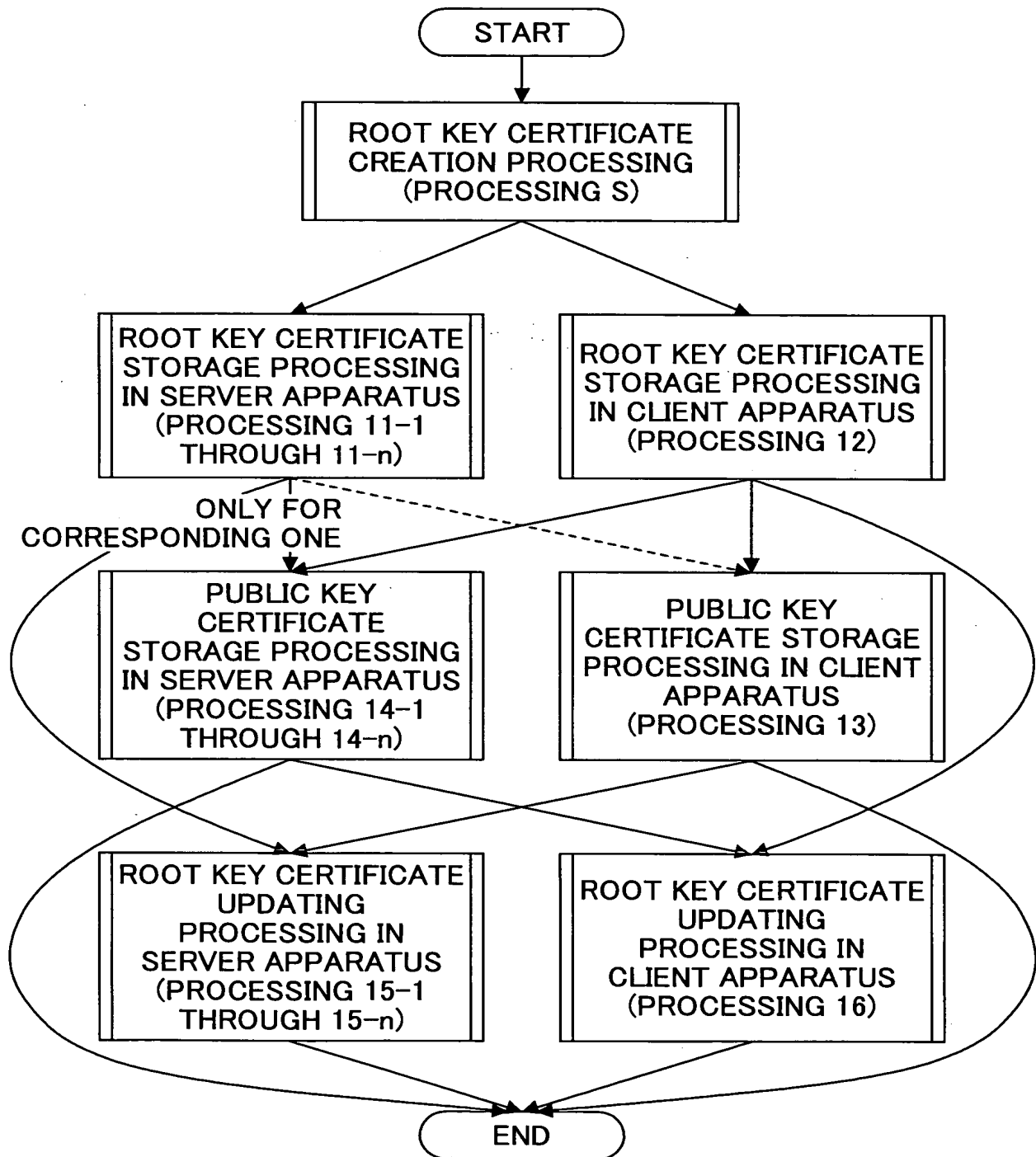


FIG.43

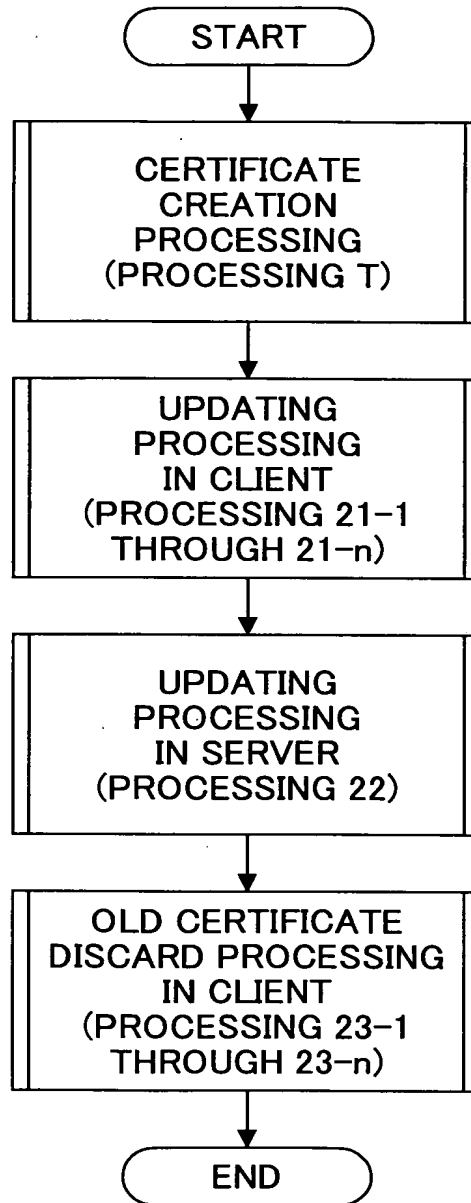


FIG.44

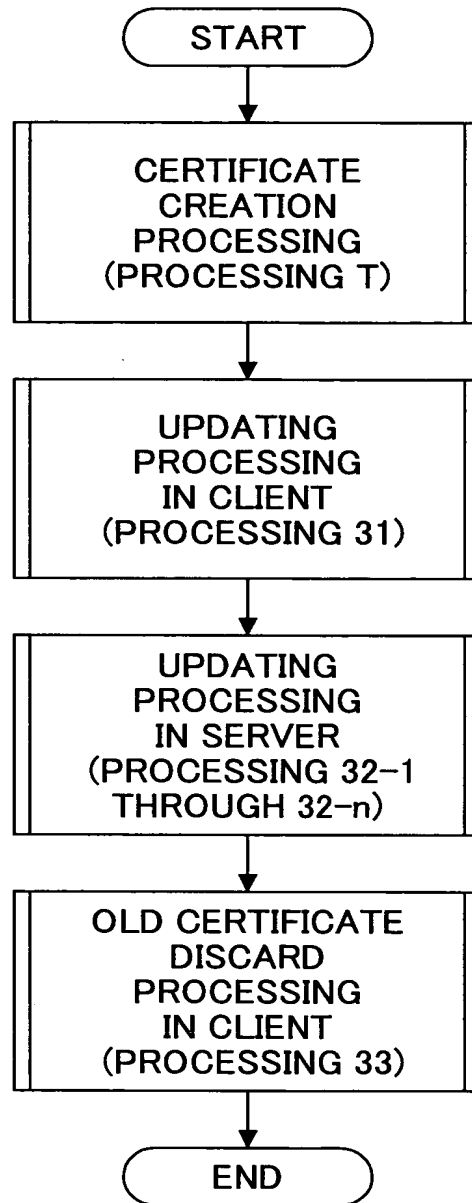


FIG.45

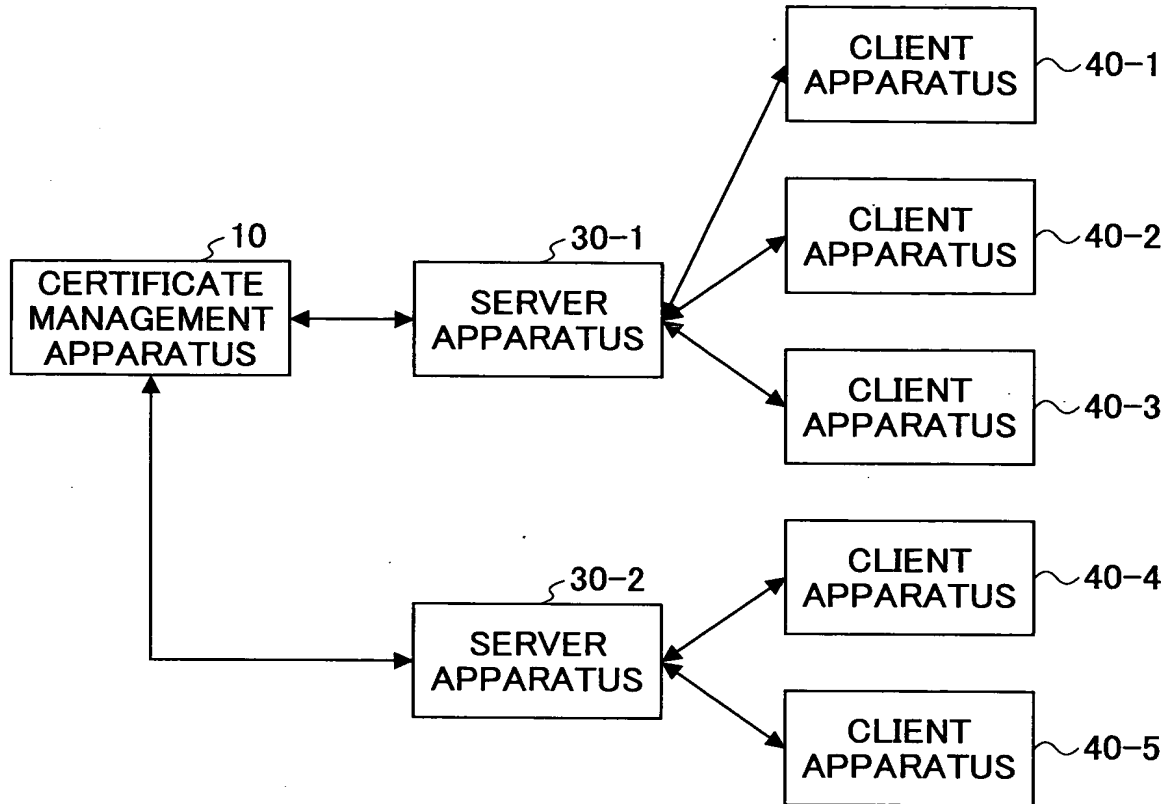


FIG.46

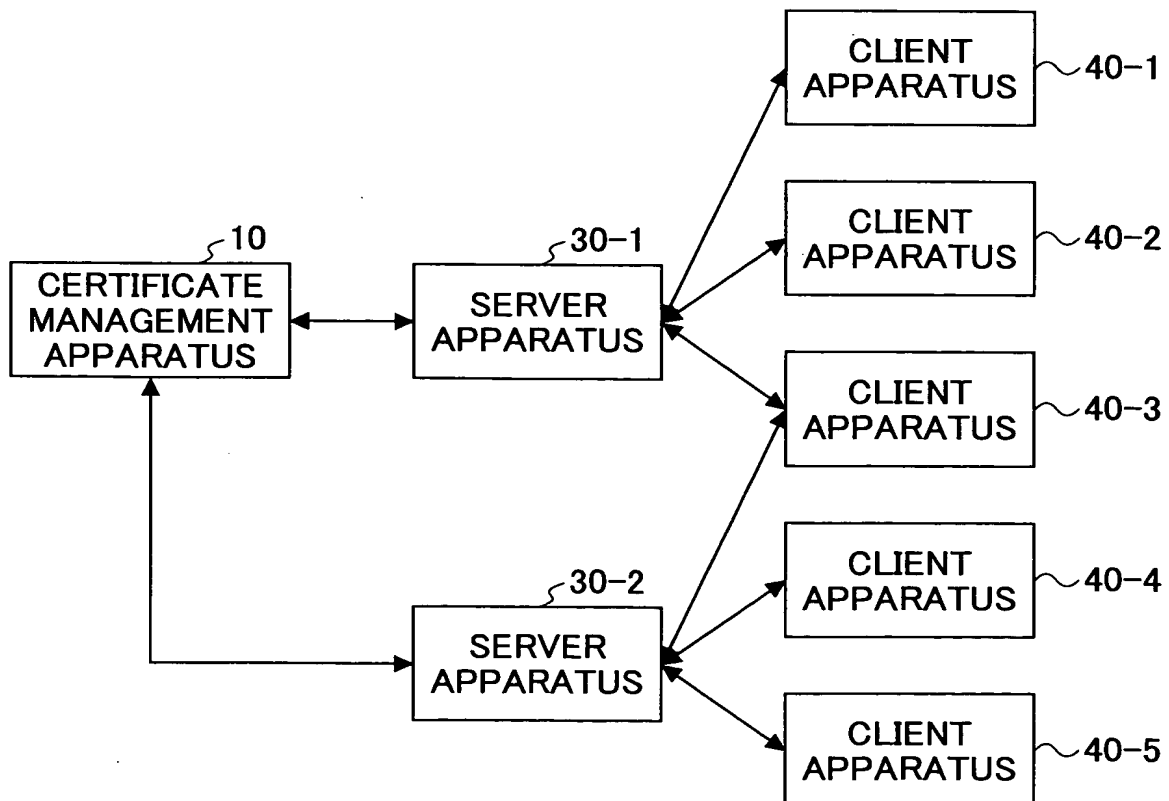


FIG.47

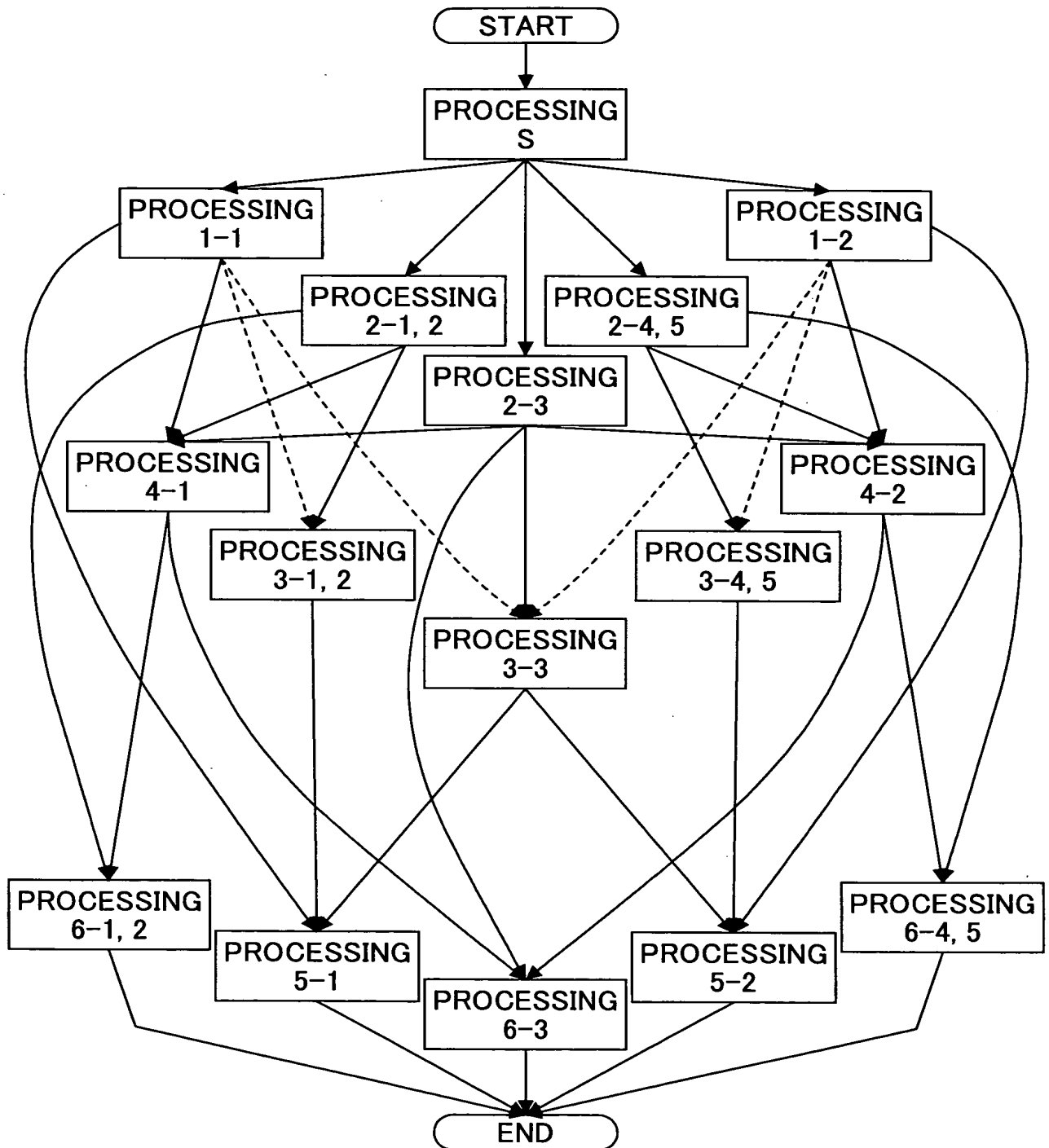


FIG.48

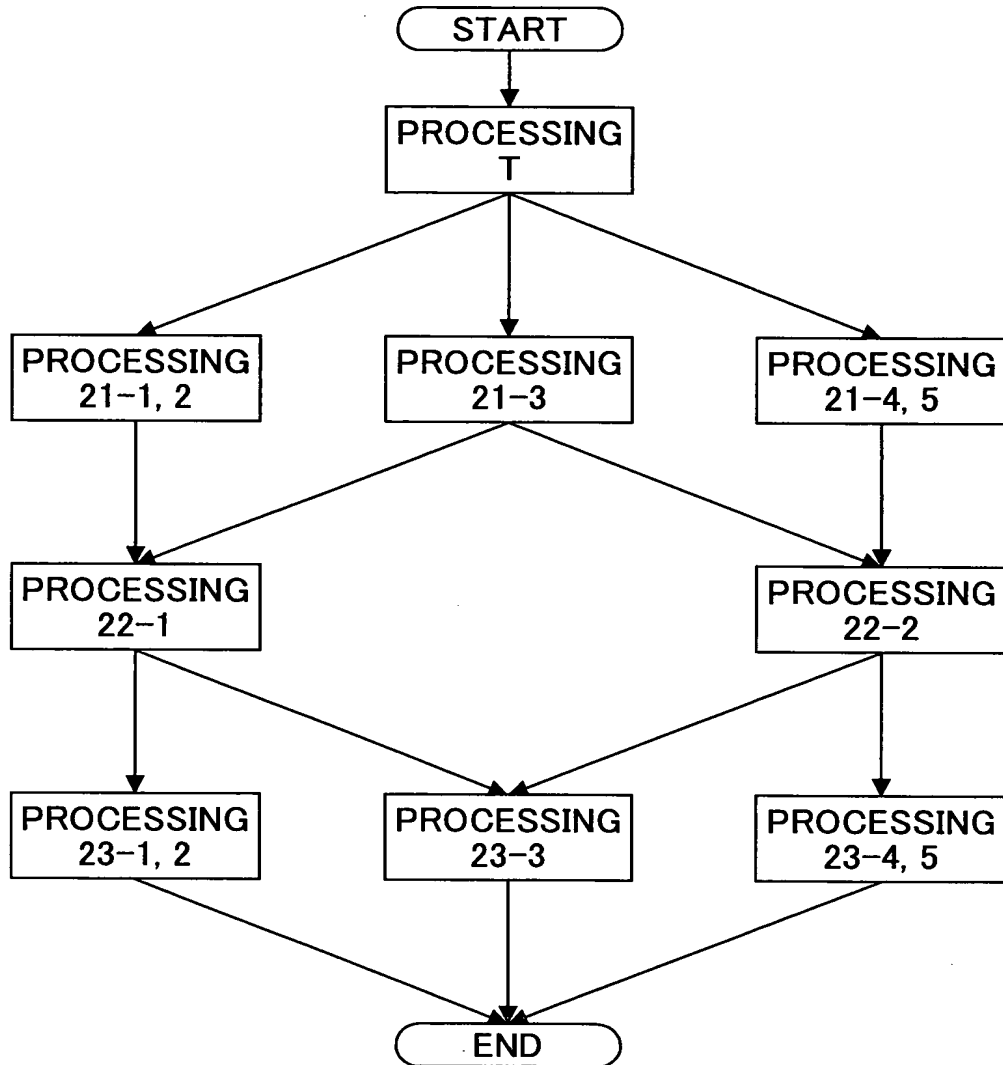


FIG.49

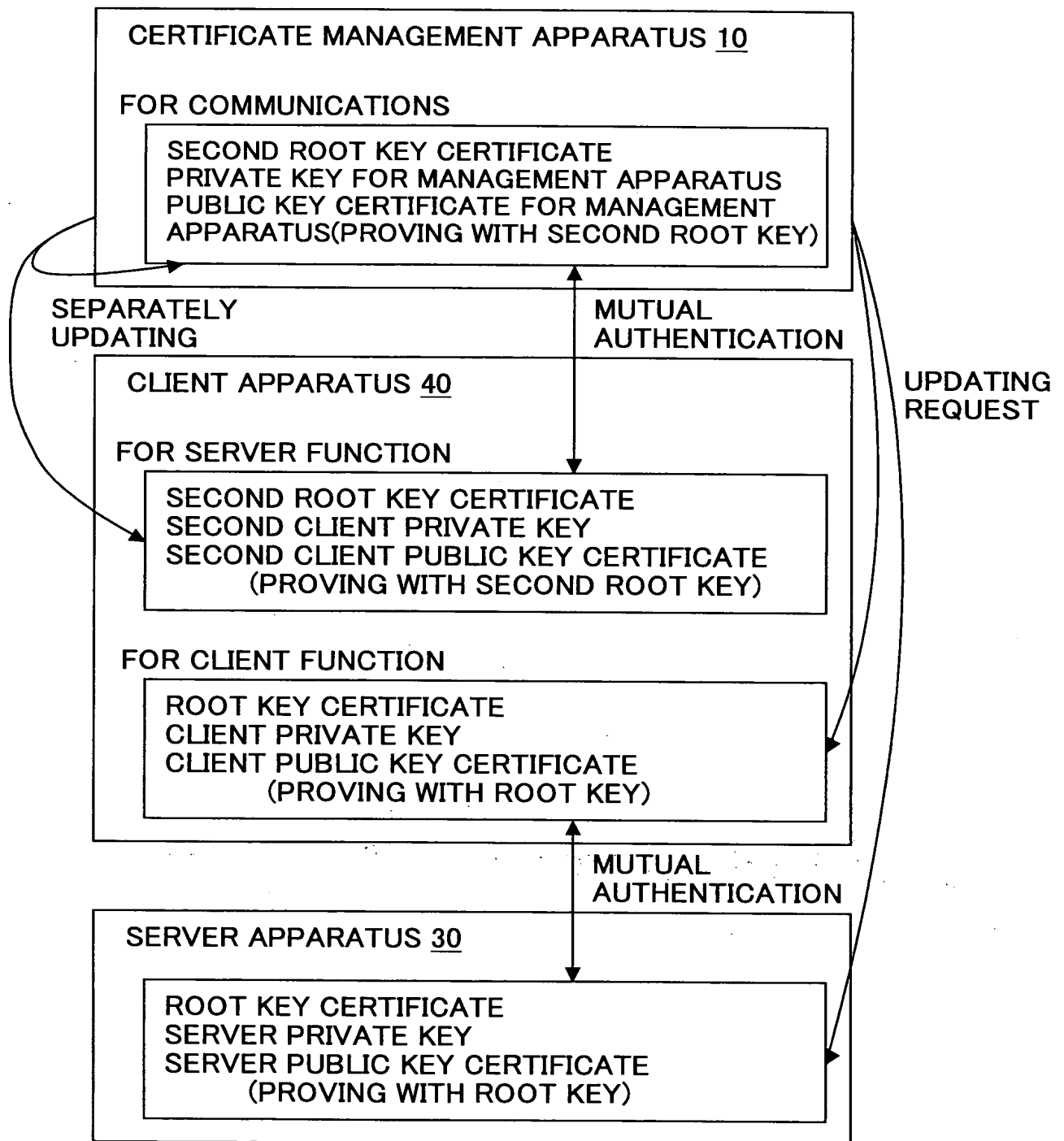


FIG.50

PROCESSING 24

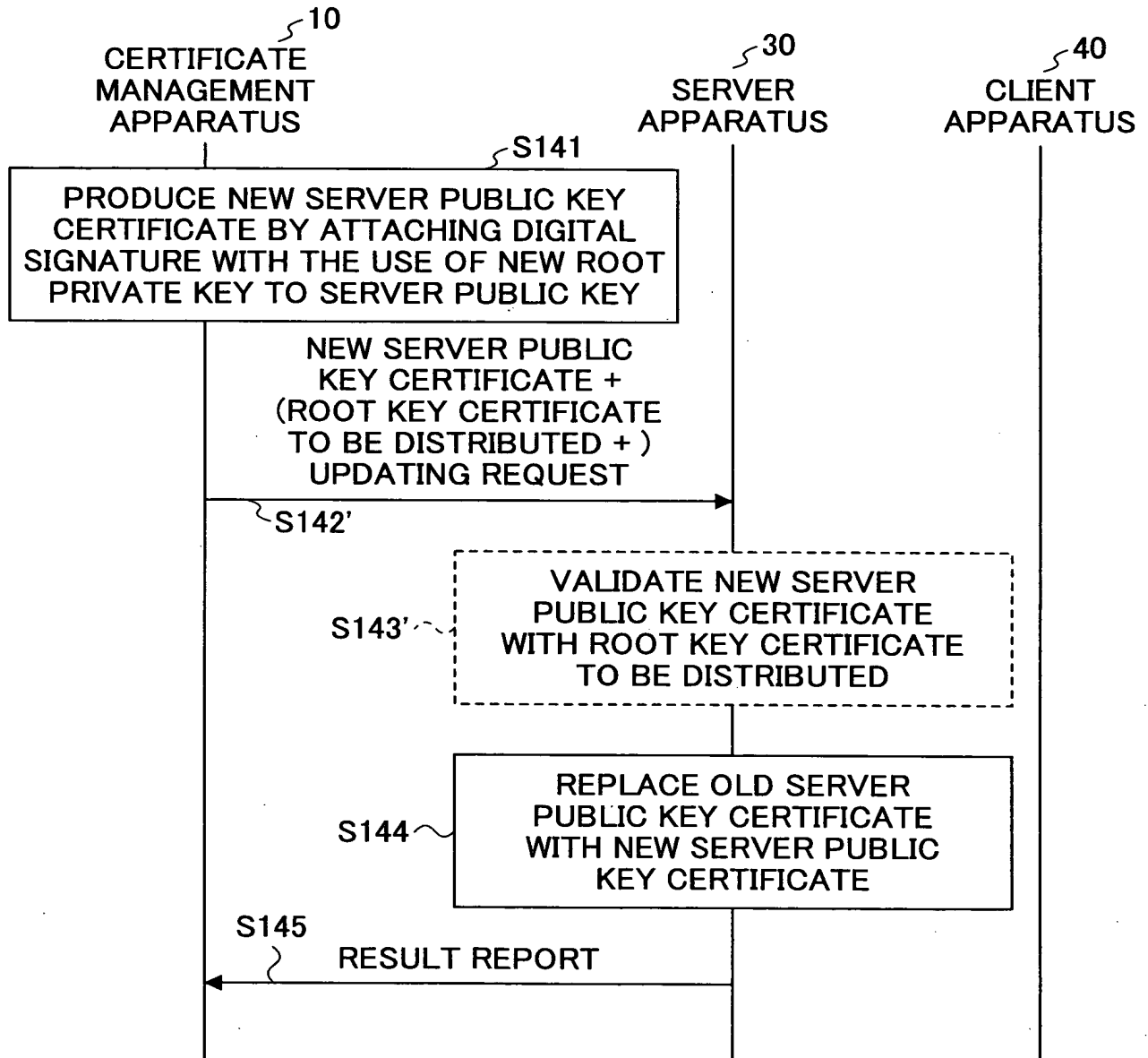


FIG.51

PROCESSING 26

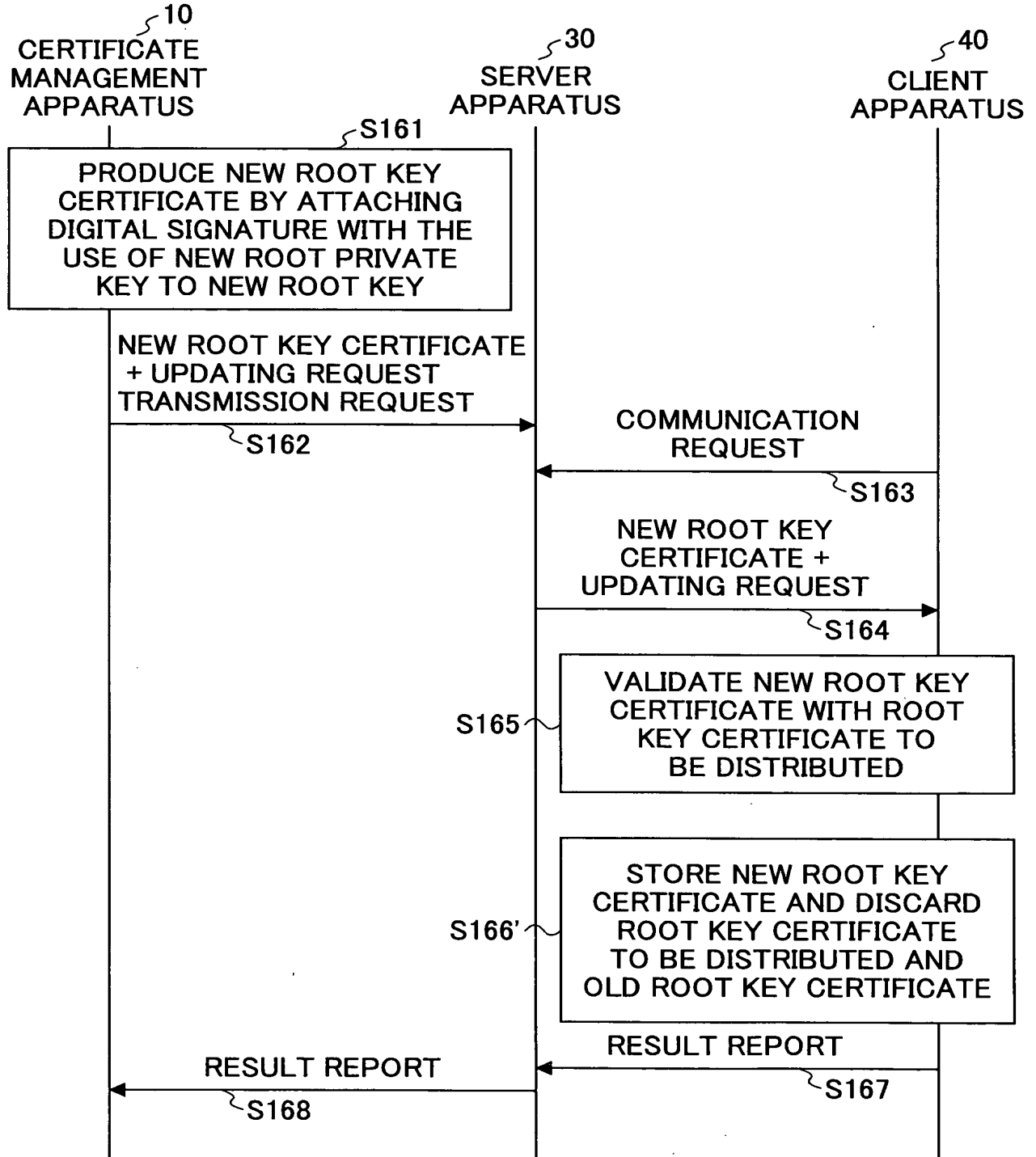


FIG.52

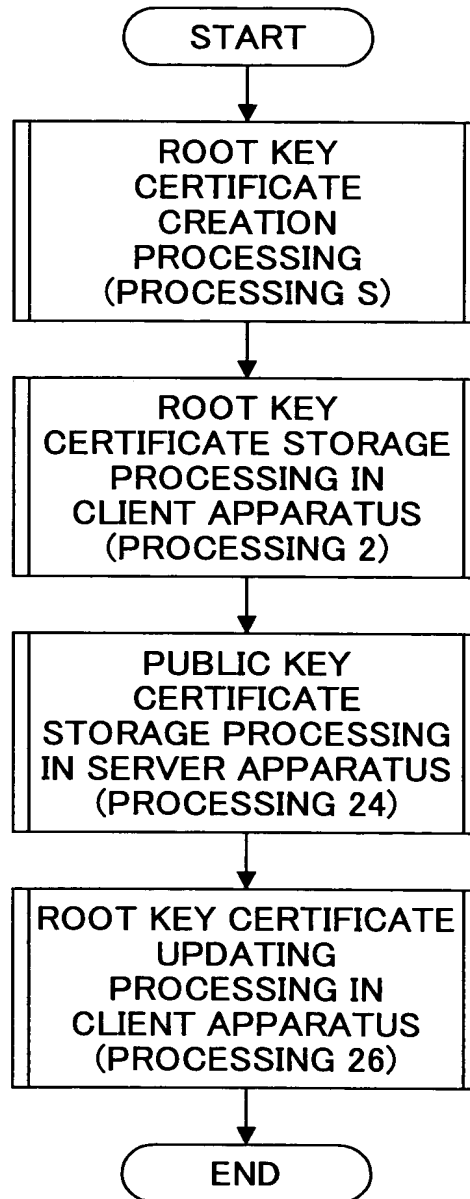


FIG.53A

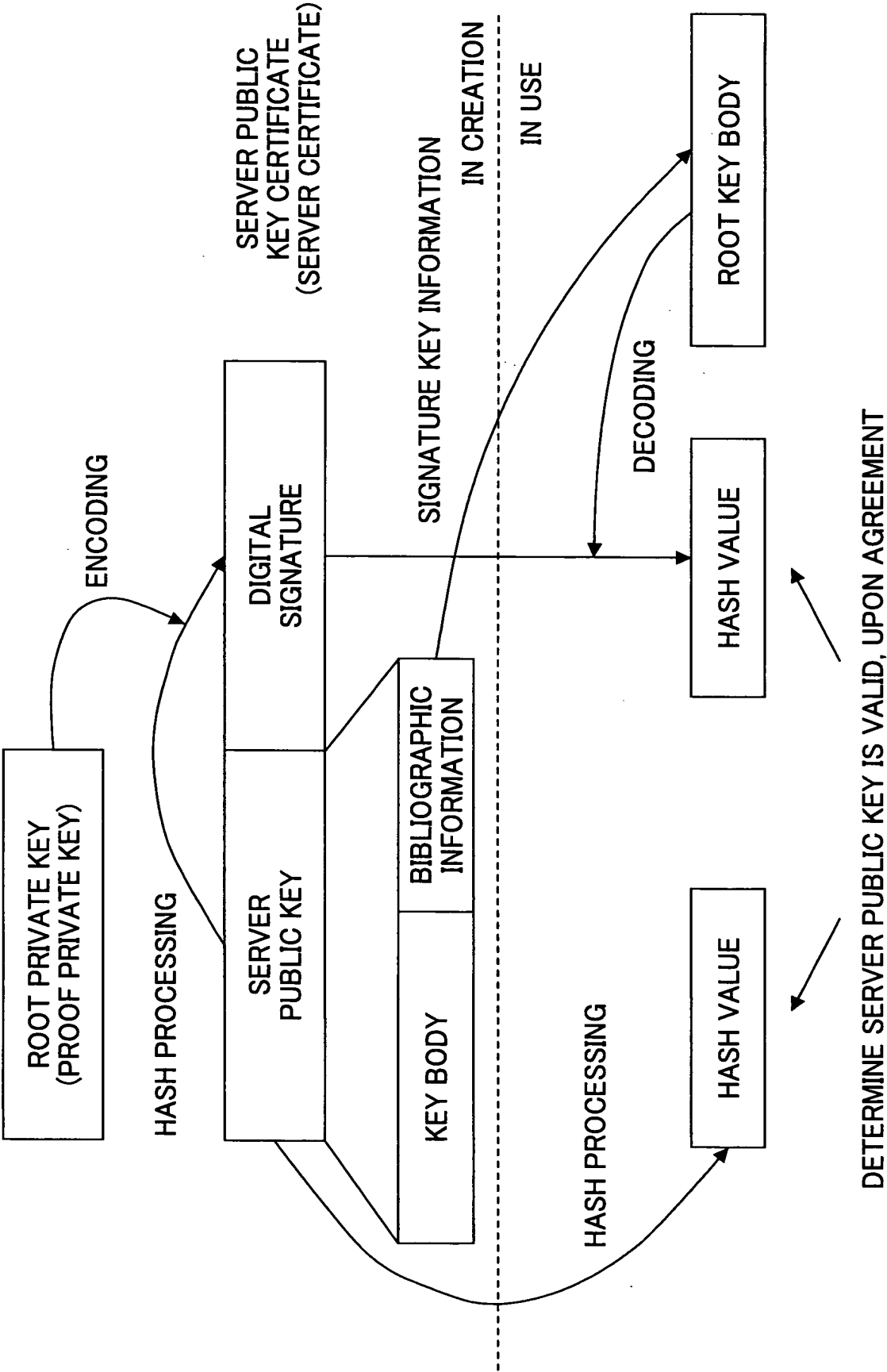


FIG. 53B

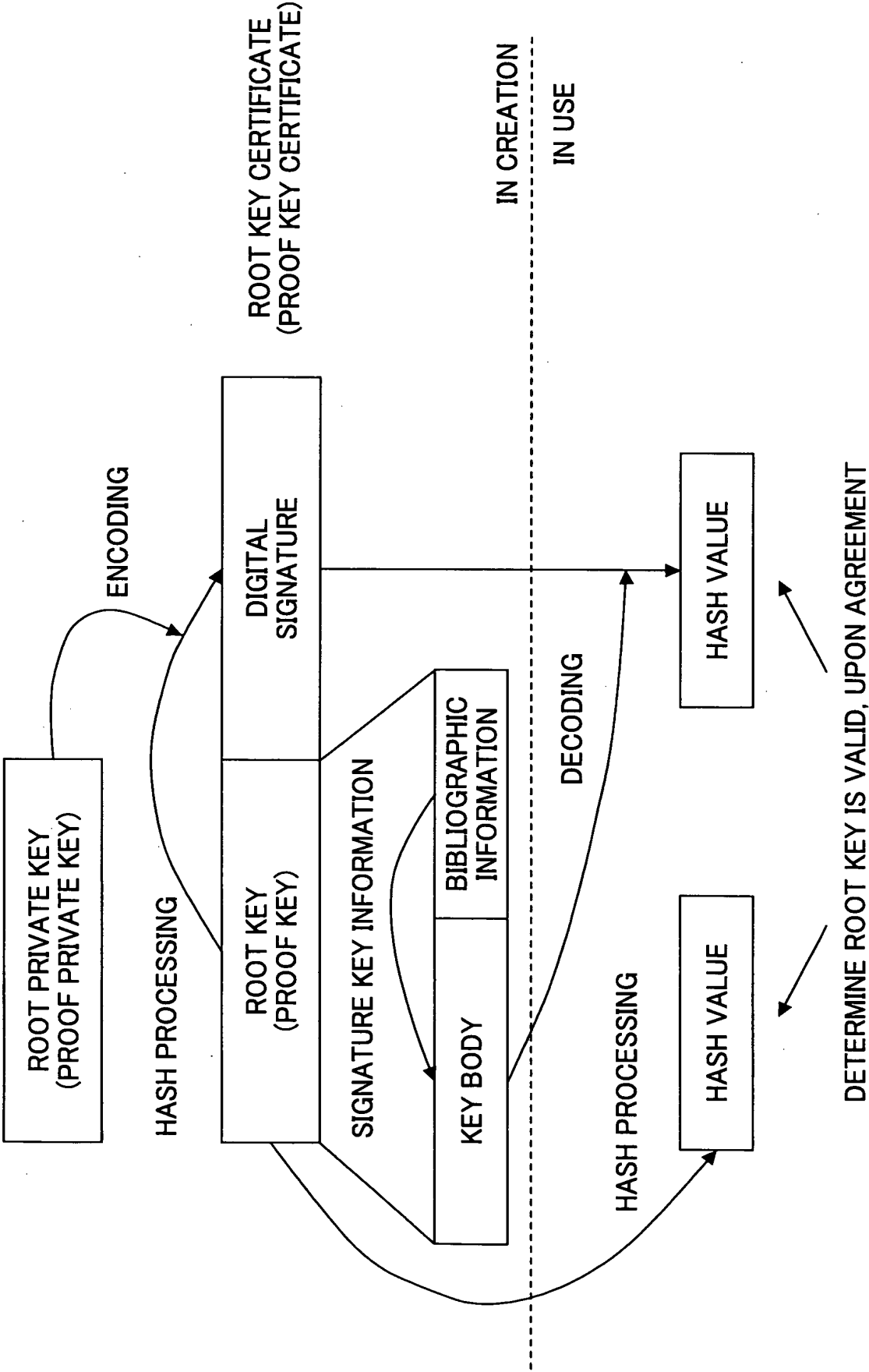


FIG.54

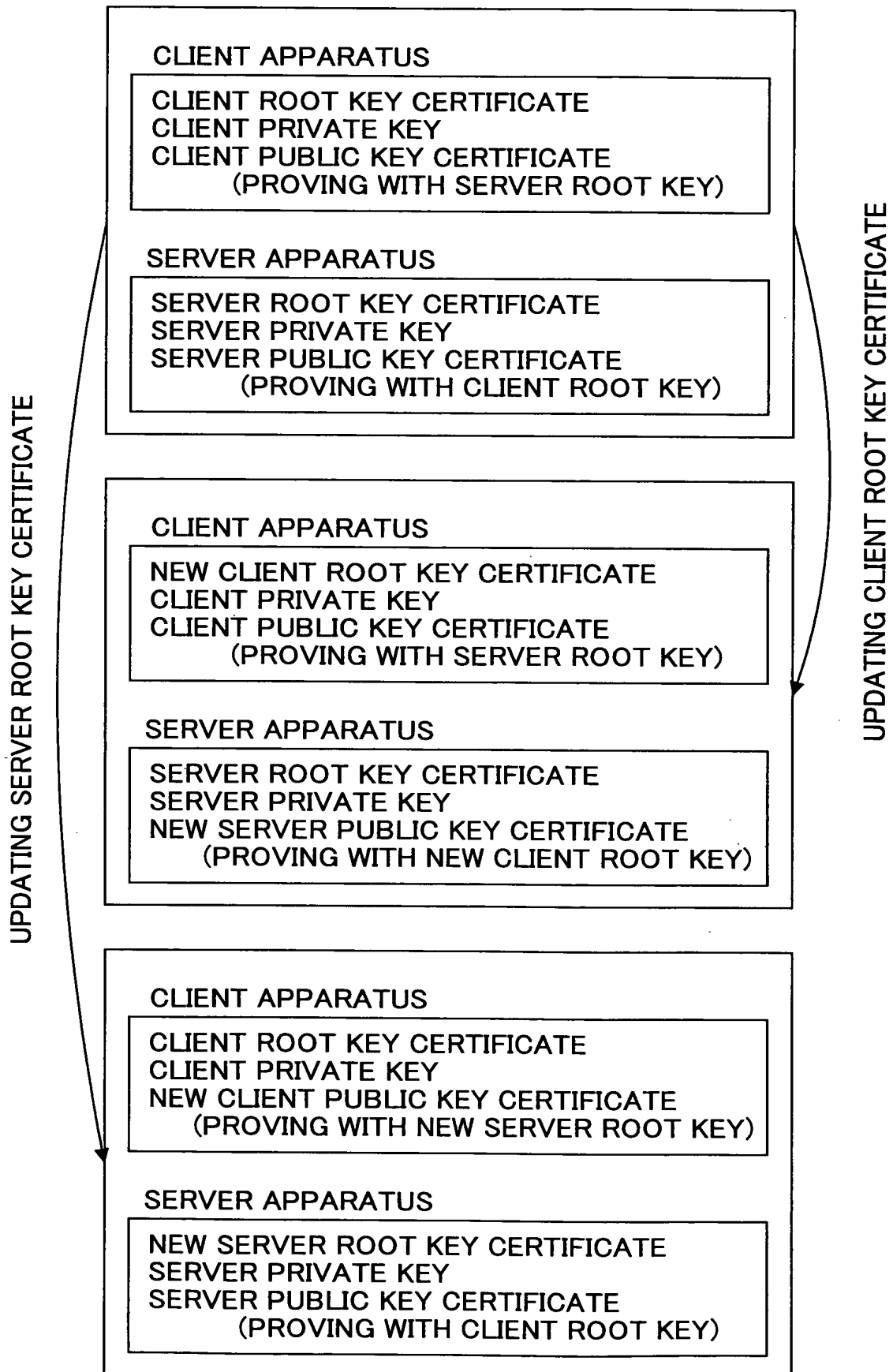


FIG.55

PROCESSING U

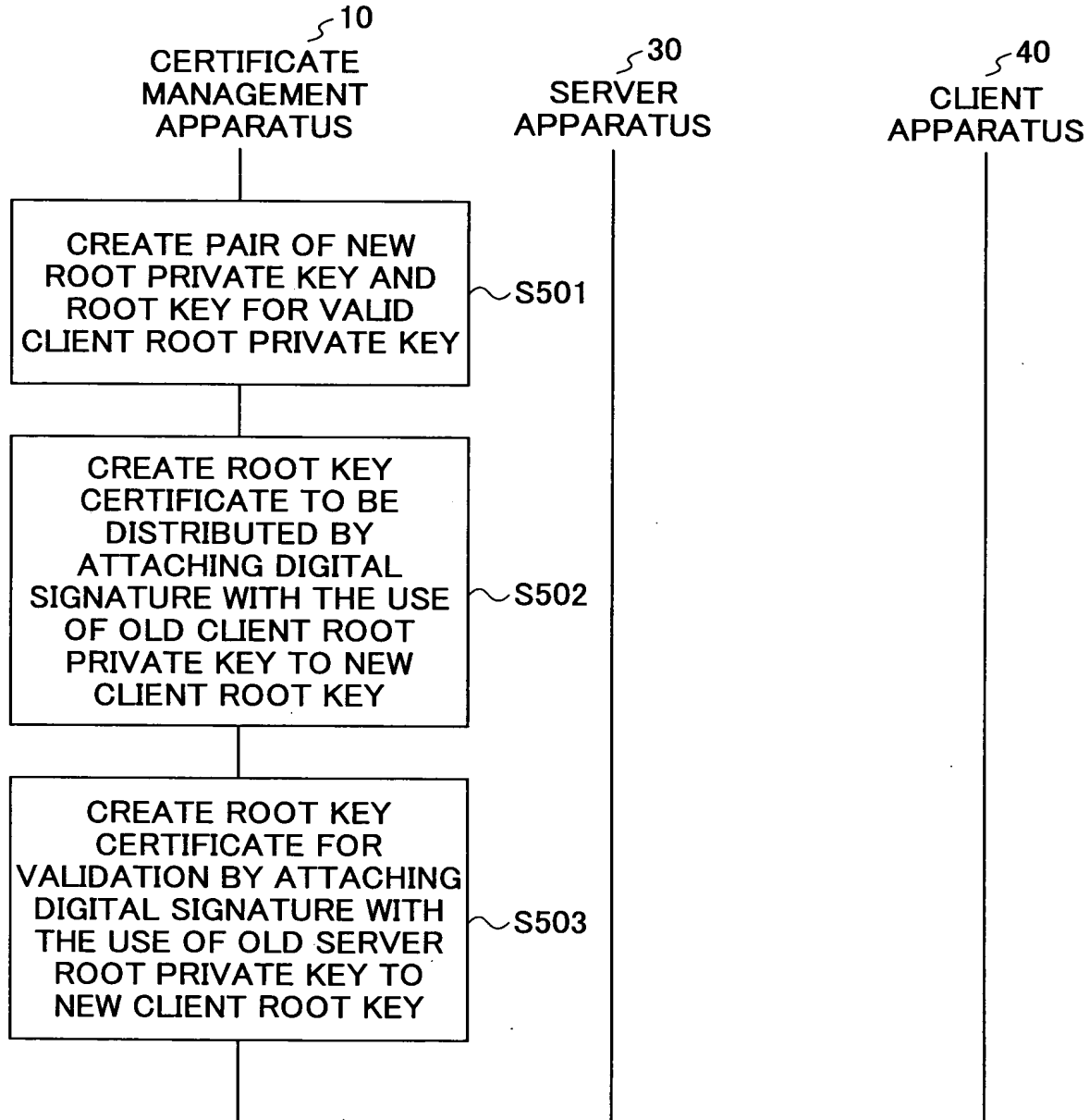


FIG.56

PROCESSING 32

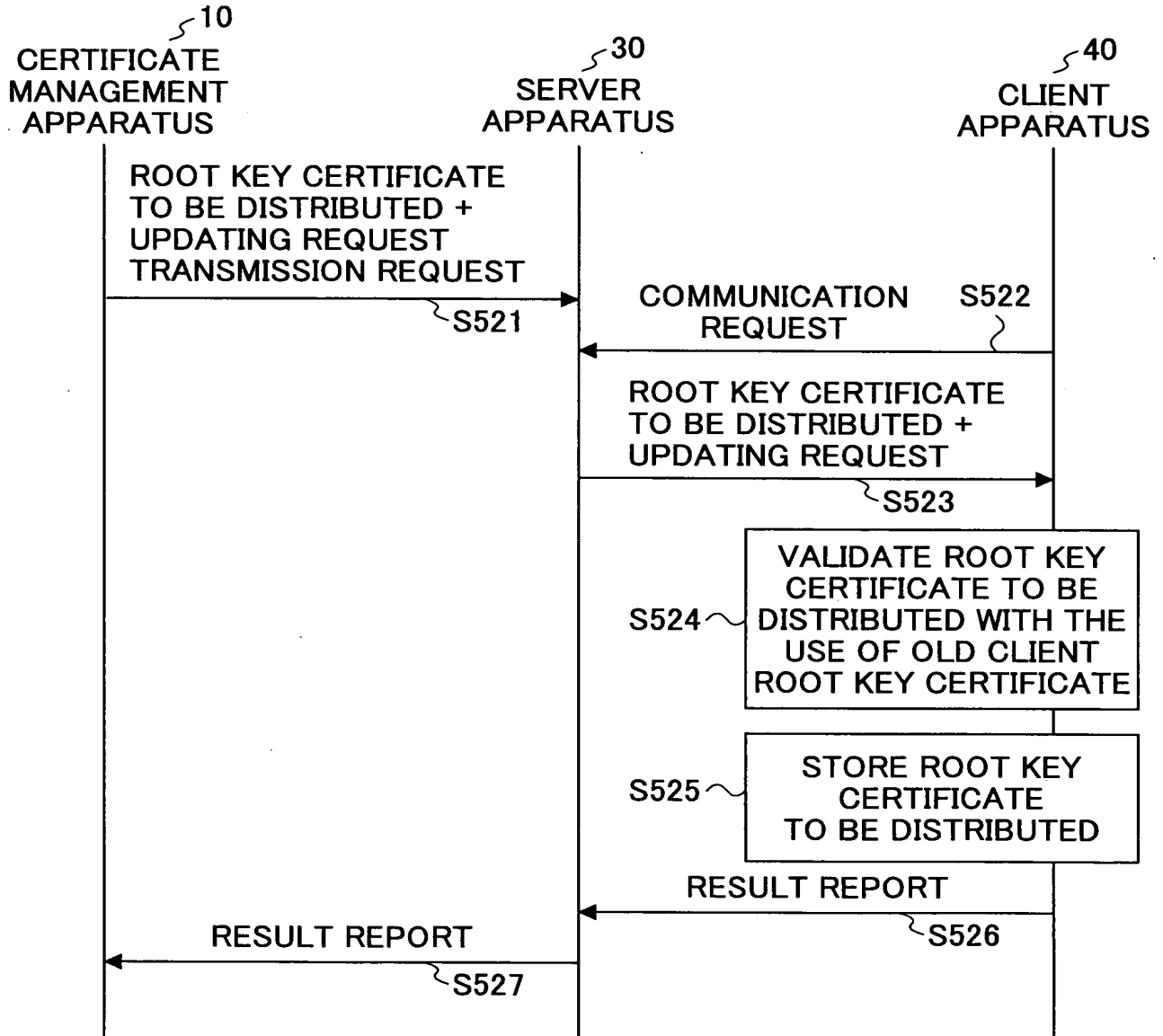


FIG.57

PROCESSING 34

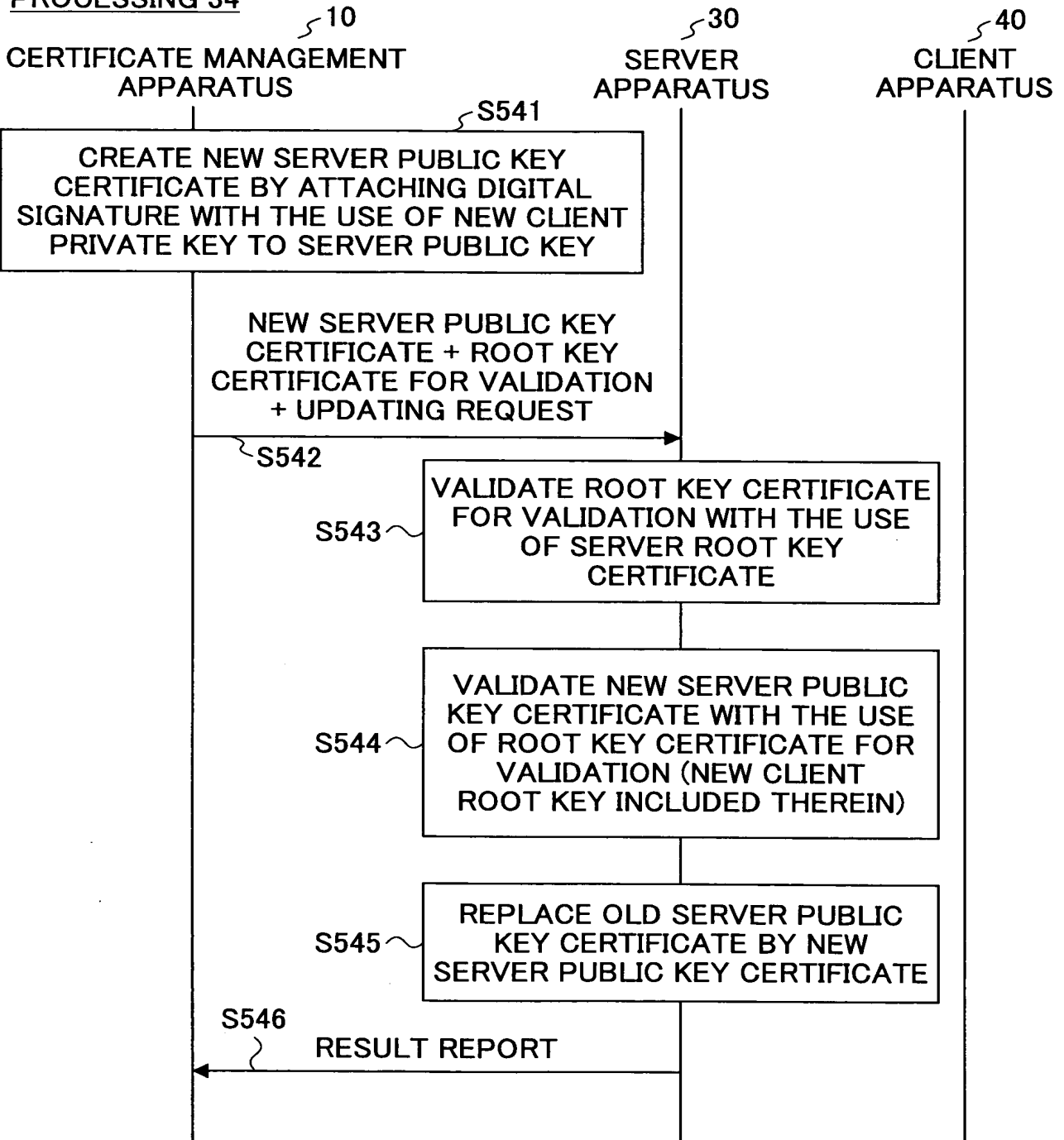


FIG.58

PROCESSING 36

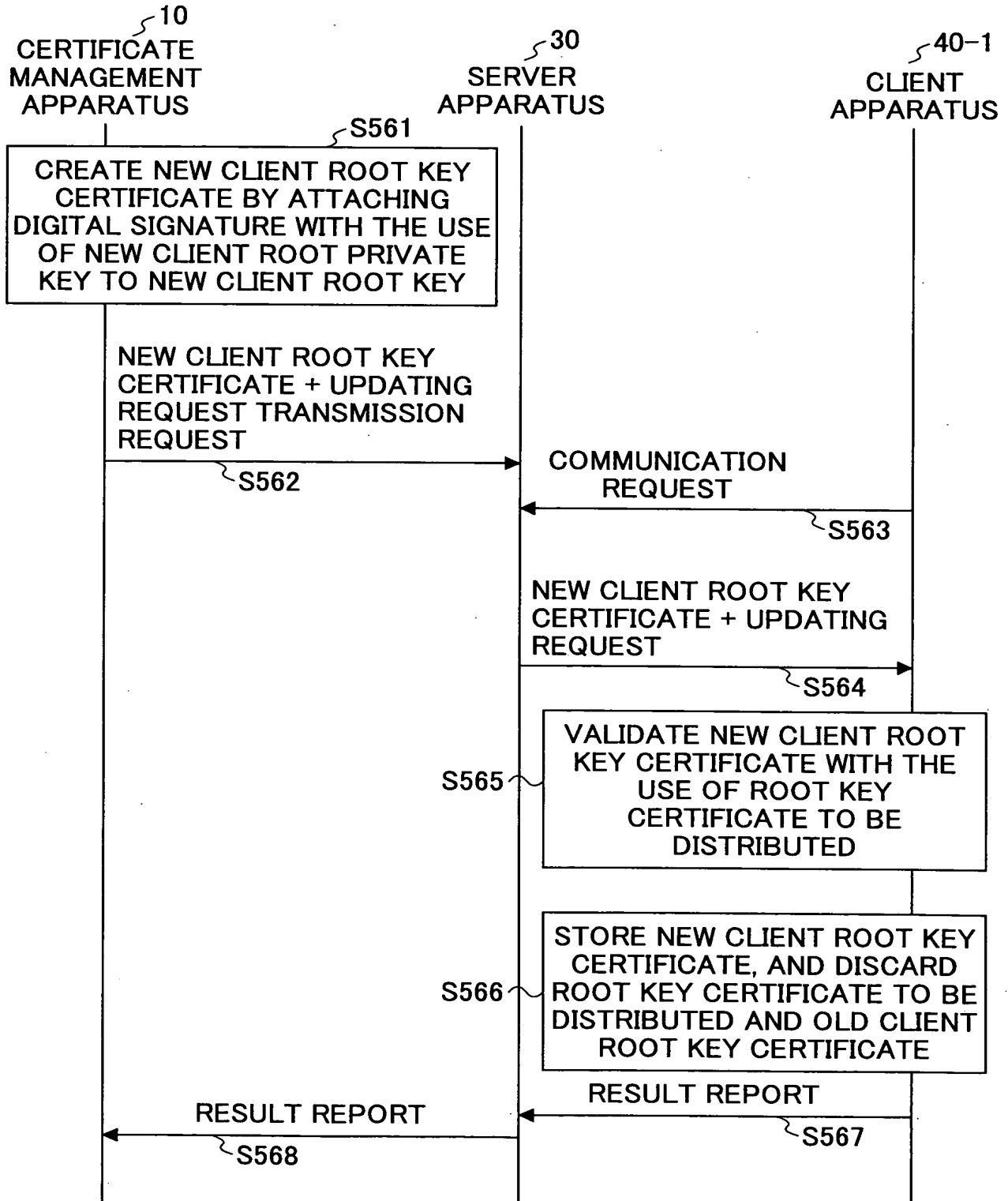


FIG.59

